FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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FEEDSTUFFS *Features This Week*

ZINC UTILIZATION—Research work by six college scientists on the effect of phytic acid on zinc utilization by the pig is reported. **Page 10.**

PELLETING—Operation of a South Dakota mill especially designed to handle large pellet feed production is described. **Page 38.**

ZINC SUPPLEMENTATION—Results of an experiment on the effect of supplementary zinc in practical chick diets containing uncooked soybeans are given. **Page 40.**

MILL RENOVATION—A California feed man renovated his feed mill, began catering to laying hen owners and tripled his sales. **Page 46.**

MIXED FEED COSTS—A college economist discusses some of the causes in variation in costs of manufacturing and distributing feeds. **Page 80.**

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July Egg-Type Chick Hatch Up 35%; Total Still Behind 1959

WASHINGTON—July was another month in which this year's egg-type chick production was greater than a year ago—a trend that has prevailed since April—but total output for the season continues to run behind 1959.

The U.S. Department of Agriculture reports that the 18,897,000 egg-type chicks hatched last month amounted to 35% more than the July, 1959, hatch. And the number of chicken eggs in incubators Aug. 1 indicate that this month's egg-type chick output will turn out to be about a fourth larger than that of the same month a year earlier.

Production of egg-type chicks during the first seven months of this year totaled 399,795,000—a decrease of 15% compared with the total hatch of the same period in 1959.

Monthly egg-type chick hatches for this season ran far behind 1959 figures until May when the trend switched with a 21% gain over the same month a year before. Output in June of this year was 65% greater than in June, 1959.

Though the season's output of egg-type chicks still is behind a year ago, the percentage of decrease has steadily declined since March.

Heavy demand for egg-type chicks

(Turn to HATCH, page 98)

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ADM Feed Unit's Sale Defined; Plan For Investment Told

MINNEAPOLIS—The president of Archer-Daniels-Midland explained this week that ADM's recent sale of its formula feed division and line of country elevators is part of the company's program of ridding itself "of those businesses that do not measure up to what ADM considers an adequate return on investment."

John H. Daniels, ADM president, made this statement in a report outlining the firm's $26 million, two-year plan of investment in new plants, products and equipment.

ADM disclosed last week the sale of 37 country and 5 sub-terminal elevators of the Commander Elevator

(Turn to ADM, page 98)

Grain, Concentrates Fed Hit Record

WASHINGTON — Producers reporting were feeding a record-high average of 5.63 lb. of grain and concentrates per milk cow on Aug. 1 as the value of grain and concentrates continued below a year ago, the U.S. Department of Agriculture reports.

At mid-July, the value of grain and concentrates fed to milk cows averaged $2.82 cwt., 8¢ less than a year earlier.

The 5.63 lb. of grain and concen-

(Turn to GRAIN, page 98)

• • •

Southeastern Egg Marketing Group Formed; Tentative Plans, Goals Told

By ROBERT H. BROWN
Special Correspondent

ATLANTA — The giant egg marketing association, long rumored as being in the process of organization in 10 southern states, became a step nearer reality in Atlanta this week following a meeting of egg producers from throughout the South (Feedstuffs, Aug. 13).

Thirty-one representatives met at the Dinkler Plaza Hotel to work out some of the details, approved the association's charter and by-laws and selected a name for the group. It will be known as the Southeastern Egg Marketing Assn.

The membership structure permits producers, corporations, partnerships, marketing cooperatives and other associations to participate in the program. All members will be required to purchase one share of common stock with preferred stock being purchased on a volume of production scale.

Temporary headquarters will be established in nearby Decatur, Ga., in the offices of the Southeastern Egg & Poultry Assn.

Harold Ford, secretary of the Southeastern Egg & Poultry Assn., in announcing that the meeting was held here, said the next step would be approval of the plans formulated at the meeting by the directors of the Southeastern Egg & Foultry Assn.

"Several minor details remain to be worked out before we are ready to start moving to officially get the association going," Mr. Ford said. "We expect to start meetings in each of the southern states in the very near future to explain the functionings of the proposed association."

10 States Proposed

The 10 states proposing to be included extend from Virginia to Florida, westward to and including Missis-

(Turn to EGG GROUP, page 95)

FDA Asked to Amend Trace Mineral List

WASHINGTON — The Food and Drug Administration has been asked by Morea Liquid Feeds and by Lime Crest Research Laboratory to amend its listing of trace minerals for feeds which have been proposed for exemption from the Food Additive Law as "generally recognized as safe" (Feedstuffs, July 16).

The requests were made in letters filed with FDA during the 30-day

(Turn to FDA, page 98)

Salmonella Germicide Discovered at Clemson

CLEMSON, S.C. — An eggshell germicide that kills Salmonella bacteria on eggs has been discovered by Dr. Bert W. Bierer of the Clemson College poultry department.

By washing eggs in a 1% solution of zinc sulfate, Dr. Bierer found that the number of Salmonella bacteria was reduced in tests conducted at the Sandhill Experiment Station. The Salmonella bacteria cause pullorum, typhoid and paratyphoid diseases.

Preliminary results of the tests using zinc sulfate indicated that the bacteria causing "rots" and "exploders," sometimes a hatchery headache, may also be reduced by washing eggs in the zinc sulfate solution. And there appears to be no harmful effect on hatchability from use of zinc sulfate, Dr. Bierer reports.

The zinc sulfate costs less than 15¢ a pound if bought in large quantities.

(Turn to SALMONELLA, page 98)

Heavy Breed Poult Hatch Rises; Light Breeds Decline

WASHINGTON — Production of heavy breed turkey poults during July was up 13% from July, 1959, while the hatch of light breed poults dropped 16%, the U.S. Department of Agriculture notes in a hatchery production report.

The rise in heavy breed turkey poult production was the first in three months. Production declined 7% in May and 4% in June in the heavy breeds. Meanwhile, the decline in light breed poult hatch has continued to lessen. The light breed hatch was 65% below year earlier figures in January but in each month, except March, the decline has lessened.

The hatch of heavy white breed poults rose 9% and other heavy breed poults 16%. Heavy white breed poults hatched totaled 2,245,000, compared with 2,065,000 the previous July. Other heavy breed poults (mostly broadbreasted bronze) totaled 2,607,000, compared with 2,244,000 in July, 1959. The hatch of light breed poults during July totaled 1,556,000 compared with 1,856,000 in July, 1959.

Regional Trends

Heavy white breed poult hatch varied by region, with four regions, New England, middle Atlantic, west north central and south central, actually experiencing a decline. The east north central region, with a large 144,000

(Turn to POULTS, page 98)

Former AFMA Head, Ralph Field, Dies

SANTA MONICA, CAL.—Ralph M. Field, former president of the American Feed Manufacturers Assn., died here Aug. 11. He was 84 years old.

Mr. Field served the AFMA on a part-time basis as traffic consultant from 1926 to 1933. He joined the association on a full-time basis in 1933 as vice president and secretary. In 1937, his title was changed to president and he served in this capacity until 1946 when he was succeeded by Walter C. Berger.

The only surviving member of his immediate family is a son, John, who resided with him here.

Milk Cow Numbers Hit Lowest Level For June in 30 Years, Says USDA

WASHINGTON — Milk cow numbers on farms in June, 1960, hit the lowest level for the month on record beginning with 1930, the U.S. Department of Agriculture reports.

Milk cow numbers for the month are estimated at 19.2 million—down 1% from a year earlier.

Milk cow numbers have declined each year from the record high in 1944, except for a slight gain in 1953. Although cow numbers continue downward, USDA points out that the decline from the previous June was the smallest since 1954.

Numbers were down from June last year in all regions except the south Atlantic and west, which had slight gains. The north central region accounted for most of the decrease.

The trend toward larger commercialized dairy herds continues, but the gain in herd size since June, 1959, was not sufficient to counter the decline in number of farms keeping milk cows.

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AUDITED PAID CIRCULATION ABC — NBP

The regional circulation of this issue is concentrated in the southeastern states

Top of the Hopper

JIMMY HOFFA'S REAL motives have not yet been revealed, poultry industry leaders agree, but there is considerable speculation as to what the teamsters' boss has in mind in organizing poultrymen. It is reported that 1500 have already joined two New Jersey locals, according to the Northeastern Poultry Producers Council.

The NEPPCO News passes on this interesting bit of speculation by a poultryman who has been close to the scene from the start. What Mr. Hoffa really wants, he says, is to further narrow or eliminate the agricultural exemption in the Motor Carrier Act. Thousands of truckers operate within this exemption and outside the teamsters' union. If Mr. Hoffa can convince eastern poultrymen that their main competition from the south and Midwest results from low trucking rates permitted by the Interstate Commerce Commission's agricultural exemption, ICC may be faced with the surprising spectacle of poultry farmers demanding abolition of the agricultural exemption, the poultryman speculates. Then, he continues, with the non-union truckers brought under regulation and in line for union organizing, Mr. Hoffa could attempt to control the food transportation industry.

Advises Richard Ammon, executive secretary of NEPPCO: "It's high time the industry took serious note of what's going on in New Jersey."

♥ ♥

MORE LEG WEAKNESS and enlarged hock disorders are showing up in turkey flocks this year than for some time past. A top poultry scientist (who soon will be reporting more fully on the problem and suggesting ways to overcome it in a Feedstuffs article) believes that since the discovery that zinc helps prevent these conditions, many feed manufacturers have included zinc in rations but have tended to overlook some other nutritional requirements which also are involved in these particular turkey troubles.

♥ ♥

"THE GOOD IN YOUR FOOD" is the title of a pamphlet distributed by the Super Market Institute. It is a collection of comments by panelists at the recent institute convention described as "a sound and reasoned reply by scientists and government officials to sensationalized books and articles about the purity of the national food supply."

Some quotes: "The progress we have made in food safety and wholesomeness is illustrated by the changing nature of the problems that attend our efforts. Milk is a good example. Disease organisms, such as those that cause mastitis, were once a problem in milk. But now many mastitis cases can be treated effectively with antibiotics, and we are worried more today about traces in milk of the drugs used to control the disease organisms.

"It's much the same with other contaminants. Years ago, dairymen had a hard time keeping down the bacteria counts in milk. Now that they have effective germicides to clean milking utensils, this job is easier. Instead they are concerned about keeping traces of germicidal chemicals out of milk. Once our dairies had a problem with fly and rodent excreta. Now they are worried lest milk contain traces of the insecticides and rodenticides used to eliminate these pests from dairy barns.

"But the fact remains that our foods today are safer and more wholesome than ever before—and chemicals used on farms help make them so." (Dr. M. R. Clarkson, Agricultural Research Service, USDA.)

♥ ♥

ANOTHER QUOTE: "While it seems hardly necessary, we should emphasize that the meaning of today's 'chemical agriculture' is even greater to

(Turn to TOP OF THE HOPPER, page 95)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Little change in the general trend of manufactured feed sales was in evidence this week. Manufacturers in most regions reported slower demand for poultry and cattle feeds. The feed grain index edged up to 65.6 this week from 65.5 last week, but was still below 69 a year earlier. The wholesale feedstuff price index lost nearly 2 points this week. It was 71.8 compared with 73.7 the previous week and 77.3 the same week last year. The hog-corn ratio, based on Chicago prices, as of Aug. 13, was 14.9 this week, 15.3 last week and 11.5 the comparable week last year. (Feed markets in detail on pages 96-98.)

Northwest

A general reduction in prices of most ingredients indicates the condition of the feed business this week—it's slow. Wheat and other small grains are coming in at the peak seasonal rush, and this is influencing prices of some ingredients.

Then, too, many farmers are still busy harvesting, a factor that always seems to have a depressing effect on feed sales, especially since many of them turn livestock into stubble fields after harvest is completed.

Some manufacturers report a slower demand for poultry feeds as the turkey crop moves toward market.

Of the feed ingredients, bran, middlings, tankage and meat meal are down, as well as several others. Soybean oil meal was down early in the week, but strengthened as much as $2 by the end of the week.

Southwest

Formula feed business is still slow and shows little promise of any nearby change for the better. Mills are running on a slow four to five day basis with backlogs of orders in many cases almost nil.

The recent price declines in ingredients, primarily soybean meal and millfeeds, has made mixers and dealers alike cautious about buying anything beyond immediate needs which has put business on a hand-to-mouth current basis. The excellent pasture conditions in most of the Southwest have also added to the hesitancy to build up inventories in certain lines.

According to some trade sources price lists on formula feed will be mixed as some will be lower while some specific lines could be up slightly.

Northeast

Formula feed manufacturing was back to normal after the settlement of the grain handlers strike. Things in general were quiet. Sales were on an even keel.

Egg prices were up 1½-2¢ doz. from last week and the market was stronger. Broilers fell off about 1¢ lb. and the market was weaker than last week. Dairy products were steady.

The production pattern remained unchanged from the past weeks. Dairy feeds led sales, followed by growing feeds. Corn was unchanged and steady.

Central States

For the first time in recent weeks there appears to be some betterment in the demand for commercial mixed feeds. Processors are reporting that the volume done the past week, coupled with the slight broadening that became evident during the preceding weekly period, was sufficient to make them feel that in all probability, the anticipated mid-summer turn for the better had been realized. However, this does not mean that sales volume is very appreciably larger than it has been. It seems that it is more a matter that a finale has been brought to the progressively poorer demand that was evident during much of July and the first few days this month. Perhaps the best way to express it is to say that August bears promise of being an improvement over the month previous.

The recovery, modest as it has been, is encouraging in that it comes in the face of a four or five week period of disappointing demand for many of the constituent feeds.

Some were inclined to feel that the evidence of a possible end to the week-by-week selloffs in soybean oilmeal might be in sight as the result of the export business that was claimed for that commodity this past week. This might be a case of "the wish being father to the thought," but some were inclined to feel that this turn of events on oilmeal might be the signal for a general reversal of trends in the demand for both constituent and commercial mixed feeds.

South Central

Feed manufacturers in this area seem resigned to accepting the present lighter volume of formula feed sales as the result of the usual "August slump." The feeling is that feeders are just not in the mood to take on formula feeds in a big way right now and there is not much that can be done about it.

Mill spokesmen feel that later on business should be better. Chances are that more people will get into the hog business. Although values have slipped some this week, the corn-hog ratio is still reasonably good and returns attractive enough to draw in additional operators. And, too, feeder cattle prices are down from last year so that probably some increase in business can be expected from this source. Not quite so favorable is the fact that corn is being fed at a record breaking rate and likely to continue so as stocks are large and prospects for next year's crop remain satisfactory.

In the meantime, mills are operating on a hand-to-mouth basis. Order backlogs are seldom larger than enough for the next day's operations. Average plant running time seems to be 4½ days.

Ohio Valley

With a continuing abundance of rainfall over most of the Ohio Valley and with ideal temperatures in the high 80's, it now appears likely that this year's fall harvest of farm crops will at least equal—and possibly exceed—those recorded during any recent year. This, of course, is in sharp contrast to the early summer outlook for serious crop shortages because of the long delays in plowing and planting caused by the excessive rainfall in March and April.

Another long-range factor that is expected to be very favorable to the

(Turn to MARKETS, page 101)

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International Milling Forms Four Major Operating Divisions

MINNEAPOLIS — International Milling Co. has announced the formation of four major divisions with Lloyd E. Workman, vice president, continuing as head of the U.S. Supersweet Feeds division.

L. E. Workman

Mr. Workman will have responsibilities for both production and sales activities of the Supersweet Feeds division.

Among the other changes in its top organization structure resulting from the formation of the four divisions were:

Malcolm B. McDonald, vice president of the firm, who has been in charge of the U.S. flour milling operation and finance, will also now assume responsibility for all U.S. bakery, durum and grocery products sales.

John A. Hendrickson, vice president, will supervise all U.S. flour milling production and will also assume responsibility for engineering and milling and U.S. purchasing.

John Tatam will become executive vice president and chief executive officer of the firm's Canadian affiliate, Robin Hood Flour Mills, Ltd., and will continue as a vice president and director of International Milling.

John B. Bean, vice president, is responsible for all manufacturing and sales activities in the company's recently-formed overseas division which supervises the operation of three mills in Venezuela.

The changes resulting from the reorganization are expected to be complete by Oct. 1.

Each of the heads of the four divisions will report directly to Atherton Bean, president of the firm.

Also reporting to the president will be P. Norman Ness, vice president, who will be responsible for the firm's grain, research and financial functions; H. E. Howlett, who is secretary and general counsel, and Wayne T. Kirk, vice president, who will be responsible for the firm's personnel and public relations functions.

The changes came about as a result of a year-long study of the company, Mr. Bean said. Purpose of the study was to secure an improved management structure "which would better fit present day conditions and prepare the company for future expansion."

"For many years we have been functionally organized," said Chas. Ritz, chairman. "This has worked successfully and yet we have felt increasingly that each of our main operational segments has grown to such size that it should become a separate division, with certain company-wide functions continuing as staff departments to serve the divisions."

Hawaii Blackstrap Production Down

WASHINGTON — Hawaiian cane blackstrap production and shipments to the mainland were much smaller in July than in June. Production in July was down about 2.1 million gallons from June and 2.4 million gallons lower than in July of last year, according to reports from the U.S. Department of Agriculture.

Shipments in July were only about one third of those in June and less than one third of the volume shipped in July last year. Thus cumulative shipments during the first seven months of 1960 total about 8.6 million gallons below those for the same period a year earlier.

Nutritionists from Spain See Soybean Use, Availability

By Special Correspondent

CHICAGO — Added to the list of foreign visitors who made the Chicago Board of Trade a port-of-call during the current summer was a group of Spanish animal nutritionists, representatives of feed and oil industries from that country and several Spanish government officials. They are spending four weeks in the U.S. under the wing of the Soybean Council of America. The group was met here, to be accompanied on its entire U.S. tour, by representatives of the latter organization.

The purpose of this sponsored tour is to afford the group an opportunity to study the use and availability of American soybeans for which the council feels there is a potential foreign market amounting to some $375 million on the basis of current value.

There were seven native Spaniards in the group that came to Chicago to be joined later at Minneapolis by two others.

Those who visited the Board of Trade and had an opportunity to witness cash and futures trading operations in soybeans in the world's largest market, as well as futures trading operations in soybean meal and soybean oil were: Enrique Galan, technical director, mixed feed factory, Mariano Perez, S.A.; J. Ronagosa, director-manager, mixed feed, Marti; G. Varela, chief, Animal Physiology Section, El Zaidin; M. Soler, manager, A.B.A.C.O.; J. Bustelo, chief, Agricultural Commodities & Livestock Products, Import Section, Ministry of Commerce, Madrid; G. Rivera, assistant manager, Soybean Council's office in Madrid, and Miss A. Padro, technical director, Gota de Ambar. Those to join the group later were: Javier de Salas, in charge of the council's office in Madrid, and Dr. E. Gali.

The group as a whole stood in wide-eyed amazement at the speed and dispatch shown in the consummation of futures contracts not only in soybeans as a raw commodity but likewise in its two products, soybean meal and soybean oil. Trading in what are minimum lots on the Chicago Board of Trade—60,000 lb. of bean oil, 100 tons of bean meal or 5,000 bu. of soybeans—would be regarded as strictly wholesale transactions in their own country, they said. While on the trading floor of the board, they also had an opportunity to examine samples of carlots of soybeans that were being offered for sale that morning.

Being greatly interested in the importing of both soybeans and its products into their country, they already seemed to be quite familiar with the fact that the progress of the U.S. soybean crop this year was not nearly up to normal and their spokesmen expressed the hope that the 1960 harvest would eventually prove to

(Turn to TOUR, page 99)

CENTENNIAL NUTRITION CONFERENCE—Caught in action while planning the Centennial Nutrition Conference sponsored by the Midwest Feed Manufacturers' Assn., in cooperation with eight Midwest land grant colleges, are, from left to right around the table: Dr. John White, vice president, University of Arkansas; Dr. G. M. Watkins, dean, Texas A&M College; Dr. Elmer Kiehl, dean, University of Missouri; Fred K. Darragh, The Darragh Co, Little Rock, president of the Midwest Feed Manufacturers Assn.; Dr. Harold Wilcke, Ralston Purina Co., St. Louis; Pat Waters, General Mills, Inc., Kansas City; Dr. C. W. Ackerson, representing the dean of the University of Nebraska; Dr. Norman Jacobson, representing the dean of Iowa State University; Maurice Johnson, Spencer Kellogg & Sons, Inc., Kansas City; Dr. Randall Jones, dean, Oklahoma State University, and Dr. Peairs Wilson, representing the dean of Kansas State University. Dr. E. J. Early, University of Colorado, was not present for the picture.

Midwest Conference Plans Taking Shape

KANSAS CITY, MO. — Plans for the Centennial Nutrition Conference sponsored by the Midwest Feed Manufacturers Assn. are reported to be taking shape. The conference is scheduled to be held in Kansas City on Oct. 23-25, 1961.

The program will include addresses by nutritional experts and administrators from land grant colleges in the Midwest, and other nationally-known speakers.

Land grant colleges in the eight-state Midwest are actively cooperating with MFMA in this event commemorating the 100th anniversary of the founding of the land grant college system.

In addition to a wide range of nutritional topics that will be covered, the committee is planning special exhibits. Among those under consideration at this time are: "Contributions of Chemicals to Our Food Supply"; "Agricultural Industrial Revolution"; "Food Is a Good Buy," and "Opportunities in Agricultural Careers."

The program committee and the exhibits and projects committee have already held several meetings. In July, deans of the land grant colleges in the Midwest, or their personal representatives, gathered in Kansas City to approve plans of the committees.

FEED STORES CLOSED

NEWPORT, N.H. — The closing of four stores of the Farmers Feed & Supply Co. was climaxed here by a public auction sale of liquidated stock from the establishments. The stock had been moved to the Newport store "for the convenience of this sale." The sale was ordered by the Biddeford-Saco Grain Co., owner of the closed establishments.

SPANISH VISITORS—A team of Spanish nutritionists and edible oil specialists is shown above visiting the Chicago Board of Trade under sponsorship of the Soybean Council of America. Purpose of the trip is to learn marketing methods for the soybean and its products.

USDA to Increase Grain Reserves On East Coast

WASHINGTON — Government-held grain stocks in ships and commercial storage along the eastern seaboard will be increased 20-25 million bu., according to an announcement this week from True D. Morse, acting secretary of agriculture.

Mr. Morse said that this is a part of the over-all program of developing civil defense readiness. These supplies would be available for emergency use in the heavily populated areas (OCDM) regions 1, 2 and 3—from New England south along the Atlantic coast.

Wheat in idle maritime ships at anchorages in the Hudson and James Rivers will be at least doubled. At present, a total of nearly 15 million bu. of Commodity Credit Corporation wheat is stored at the two ship locations—7.4 million bu. in the Hudson River and 7.3 million bu. in the James River. This will be increased to 15 million bu. or more at each anchorage, for a total of more than 30 million bu.

In addition, minimum stocks of CCC food and feed grain in commercial storage at less vulnerable locations in the eastern states will be increased by about 5 million bu.

In February, 1956, the CCC board of directors adopted a policy of giving consideration to possible civil defense need in the positioning of CCC food stocks. In keeping with this policy, additional food and feed grains have previously been stored in the northeastern part of the U.S.

President's Plan

"Increasing grain storage near large eastern population centers is a step in carrying out the department's responsibilities under the President's National Plan for Civil Defense and Defense Mobilization," Mr. Morse said. "The decision to do so was based on current appraisals of continuing studies of the over-all situation.

"We will continue to review the food situation which might be faced in a post-emergency period, and, in cooperation with the Office of Civil and Defense Mobilization, will be prepared to take further action if this appears desirable and practicable."

At the peak of storage shortages in 1955, a little more than 22 million bu. of CCC-owned wheat were stored in idle maritime ships in the Hudson River and more than 25 million bu. in the James River.

More recently, normal commercial space has been adequate to handle storage needs, and less dependence has been placed on supplemental ship

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Part 1 of a Review

Proceedings of 49th Annual Meeting Of the Poultry Science Assn.

By Dr. Elton L. Johnson
University of Minnesota

The nutrition section of the 49th annual meeting of the Poultry Science Assn. held at the University of California, August 2-5, opened with several papers dealing with vitamin interrelationships, assay techniques, preservation of potency and other related topics of importance in the feeding of poultry. A resume of selected papers from this group as well as reports dealing with dietary energy and nutrient density is presented in Part 1 of the proceedings of the meetings. Discussions of the remaining papers will be included in Parts 2 and 3.

RIBOFLAVIN—Studies at Oklahoma State University revealed that laying hens responded with lower body and egg weight when the riboflavin level of the diet was reduced from 1.5 to 1.0 mg./lb. Higher levels of 2.0 and 2.5 mg. did not seem to be of any advantage. These workers also studied the effect of niacin levels of 10, 15, 20 and 25 mg./lb. but concluded there was no appreciable effect of niacin on the requirement of the hen for riboflavin.

This report lends some question to the recommended level of 1.0 mg. of riboflavin per pound of feed for laying hens which was indicated in the 1954 NRC report. However, it is quite common for those formulating rations to include levels considerably higher than the minimum suggested by NRC and it is questionable whether this report will cause many to readjust their formulas for laying hens.

VITAMINS E, A AND ANTIOXIDANTS—A study was made by Sial and associates at Washington State University on the effects of torula yeast and brewers yeast on chick growth and biochemical changes related to supplementation with dietary vitamin E. Growth of chicks was superior when torula yeast was fed, but the supplementation of either type of yeast with vitamin E had little or no effect on growth. Several biochemical assays revealed differences due to treatments but the application of this to practical feeding awaits further information.

Dr. E. L. Johnson

AUTHOR — This review of papers presented during the 49th annual meeting of the Poultry Science Assn. at the University of California, Aug. 2-5, will be reviewed by Dr. Johnson in three parts, the others appearing in subsequent issues of Feedstuffs. Dr. Johnson has been head of the department of poultry husbandry at the University of Minnesota since 1953. Before his Minnesota appointment, he was in charge of poultry nutrition research and teaching at Iowa State University. He has degrees from Oklahoma State and Purdue universities.

A step forward in studies related to vitamin E was indicated in the work by Dicks and Matterson at Connecticut outlining a new biological method for the determination of potency of the alpha-tocopherols by shortening the two-week liver storage bioassay to one requiring only three days of supplemental vitamin E feeding. This rapid assay in which the growth response is correlated with liver storage on a linear basis will undoubtedly encourage more assays and studies related to vitamin E nutrition.

Discussions relating to vitamin E invariably get into the area of antioxidant effects in feed since vitamin E can also act as an antioxidant as well as providing its specific role as a vitamin. Two papers were presented of interest in this respect and the first was by Williams and coworkers at Texas regarding the ability of antioxidants to preserve carotene and xanthophylls in alfalfa meal and complete diets. They reported that Santoquin at a level of 0.0125% improved carotene retention in stored alfalfa meal but BHT (butylated hydroxy toluene) was without effect. Their work also showed that retention of carotene was similar in complete diets. The xanthophylls were relatively resistant to destruction at either elevated or cruel environmental temperatures.

Of interest to broiler producers was the portion of the report which indicated that neither BHT nor Santoquin had any effect on dietary utilization of xanthophyll when measured by serum and skin xanthophylls. This report shows that alfalfa meal stored at 55° F. or lower would retain the major portion of the initial carotene but that elevated temperatures such as those exceeding 85° F. would ordinarily result in considerable destruction of carotene and this would tend to indicate the advisability of adding an antioxidant for carotene preservation.

The second report on antioxidants by Gordon and Machlin of Monsanto Chemical Co. deals with the confusing picture of the relationship between antioxidants and vitamin E in stimulating chick growth and preventing encephalomalacia and other disorders originally thought to be specifically related to a vitamin E deficiency.

Their evidence indicated that Santoquin would improve chick growth and feed conversion when it was included in a peroxidized safflower oil with corn and soybean meal as the main ingredients when 0.05 or 0.1% Santoquin was added to the ration which already contained 0.022% vitamin E.

This report also involved a discussion of the factors important in the development of encephalomalacia, exudative diathesis or muscular dystrophy.

Needless to say, there was not complete agreement as to the conditions causing each of these abnormalities or the specific preventive for same. It is apparent that we must continue to pay attention to vitamin E, levels of diets and perhaps also to the possibility of supplementation with antioxidants.

A cooperative study reported by Wilkinening et al. between the Alabama Flour Mills and Distillation Products Industries included not only a report of the loss of vitamin A activity in storage during the summer in an Alabama warehouse but also a relative comparison between gelatin-stabilized and wax-stabilized products.

They concluded that two gelatin-stabilized vitamin A products were superior in maintaining vitamin A activity after storage. This report coupled with the one mentioned earlier from Texas shows two possible techniques to permit assurance that a satisfactory level of vitamin A may be retained in commercial feeds for final consumption by the chicken or the turkey.

VITAMIN K—Another interesting report on vitamin effects was that of Waldrup and associates at the Florida station which indicated a commercial source of vitamin K activity (Klotogen F) reduced the mortality of chicks suffering from cecal coccidiosis.

Mortality was reduced linearly as the level of menadione sodium bisulfite complex was increased from 0 to 1.4 gm./ton of feed. They also reported increasing benefits up to 4.56 gm./ton but this may seem to be a relatively high level for practical considerations since the ration used by these workers did not contain alfalfa.

The obvious benefit in the control and recovery of chicks suffering from coccidiosis is worthy of consideration in formulating special rations.

ENERGY IN CHICK RATIONS—Further studies on energy and protein relationships by Siani and oth-

(Turn to PROCEEDINGS, page 100)

June Consumption Of Feedstuffs Up

WASHINGTON — June consumption of commercial feedstuffs was about 200,000 tons more than the previous month, but 15,000 tons less than a year earlier, the U.S. Department of Agriculture reports.

The June consumption of 1.7 million tons brought domestic disappearance for the October-June period to almost 16.3 million tons. This is not quite 100,000 tons below the same nine months the previous year.

Production of 1.9 million tons was slightly below the month before, but brought the season's total to 16.8 million tons or about 400,000 tons more than October-June the year before. Although imports for June and the season to date were only about half those of a year earlier, much of this decrease was offset by increased exports.

Disappearance of soybean meal and cottonseed meal in June both lagged behind year earlier levels. Disappearance of soybean meal, at 712,000 tons for June and 6.4 million tons for October-June, was behind for both the same periods a year earlier. Exports of 44,500 tons of soybean meal in June almost doubled those of May and brought the nine-month total to 524,000 tons or about 126,000 more than the same period last season.

Cottonseed meal consumption

(Turn to FEEDSTUFFS, page 100)

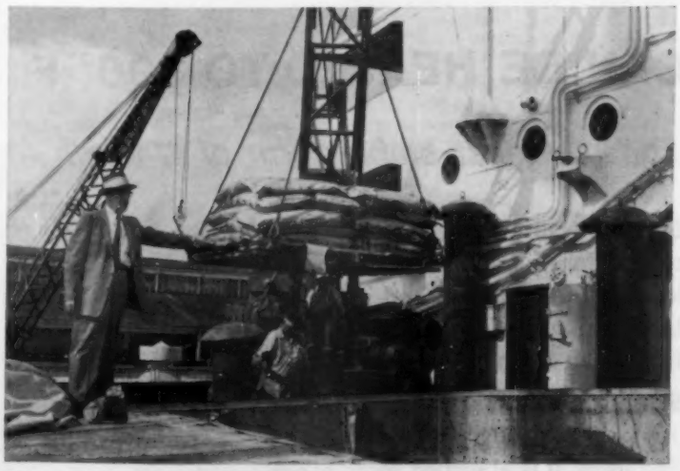
AFMA Gives Results Of Its Job Study

CHICAGO — The American Feed Manufacturers Assn., Inc., has announced publication of the results of a study conducted on opportunities for college graduates in the feed industry.

The study report gives information on desired personal qualifications, educational background, starting salaries and positions offered to college graduates.

No attempt has been made to offer opinions or conclusions based on the data gathered. For example, the report refers to average starting salaries of the feed industry vs. all agribusiness firms vs. all business and industry.

It was stated that the report may be of help in recruiting students for agricultural colleges and applicants for feed industry employment. Further studies in this field could provide more complete job descriptions, including opportunities for advancement, and this information may be needed for optimum recruitment results, according to AFMA.



FROM PEORIA TO LEBANON—Shipment of 110 tons of poultry feeds from the Peoria, Ill., plant of Nutrena Mills, Inc., to Beirut, Lebanon, demonstrates the influence of the St. Lawrence Seaway in expanding export business for midwestern industry. Heretofore, the Peoria factory distributed its products only in the midwest states while the company's Memphis plant shipped overseas via the Mississippi-Gulf of Mexico route. J. J. Conn, representing Nutrena, supervises the loading operation onto the Dutch motorship Tabian at the Navy pier, Chicago.

SPECIALIST HONORED — Leonard Z. Eggleton (second from right), extension poultry specialist, Iowa State University, is winner of the 1960 Pfizer Extension Teaching Award. He received his $1,000 award at the closing banquet of the Poultry Science Assn. convention, held at the University of California, Davis, Cal. On hand for the presentation (left to right), are: G. E. Bearse, poultry science department, Washington State University, and president of the association; Arthur F. Gannon, extension poultryman, University of Georgia, and the first Pfizer Extension Award winner (1958); Mr. Eggleton, and Dr. William Sherman, Pfizer nutritionist from the company's Agricultural Research and Development Center, Terre Haute, Ind., who made the presentation.

Dr. Salsbury's to Offer 2 Vitamin A Products

CHARLES CITY, IOWA—Dr. Salsbury's Laboratories will soon offer two new vitamin A products for use in fortifying feeds, premixes, concentrates, mineral mixtures, pellets and other products for poultry and livestock.

The products will be labeled "Vitamin A-30" and "Vitamin A-10." Production "is being established at a sufficient level to meet anticipated demand," say firm officials.

The dry, stabilized palmitate form of vitamin A will be encased in brownish-tan spherical beadlets — with a gelatin-sugar-starch base — in the range of 30-80 mesh. These beadlets will be mixed with yellow degerminated corn meal, which will form the carrier.

Vitamin A-30 will have 30,000 U.S.P. units of vitamin A per gram; Vitamin A-10 will furnish 10,000 U.S.P. units per gram. Both will be put up in 50-lb. sizes in polyethylene-lined bags.

Rooster Feed Co. Sale Announced

DUBUQUE, IOWA—Two Oelwein, Iowa, residents and a Dubuque businessman have purchased the Rooster Feed Co. here from Philip R. Park Corp. of California.

The firm will be known as Rooster Feeds, Inc. Owners and officers of the new corporation are: Mrs. William Noble, Oelwein, president; Donald Deike, Dubuque, vice president and general manager, and William Noble, Oelwein, secretary-treasurer.

Mr. Deike, who was manager of the firm when it was owned by the California firm, said that there will be no change in management, office or field personnel and stated that the new firm will concentrate on "business expansion."

FEED SALESMAN DIES

AUBURN, IND.—William F. Burbank, 64, Fort Wayne, Ind., salesman for Allied Mills' northeastern district for 31 years, died at the Auburn Hatchery & Feed here while calling at the firm on business. Mr. Burbank was a direct descendant of Luther Burbank, naturalist.

Placements of Broiler Chicks for Hatchery Flocks Down 7% in July

WASHINGTON — Domestic placements of pullet chicks for broiler hatchery supply flocks by leading primary breeders of broiler replacement stock totaled 2,113,000 chicks during July—7% less than the 2,279,000 chicks placed in July of last year.

The U.S. Department of Agriculture reported this week that total placements (domestic plus exports) were reported at 2,339,000, compared with 2,408,000 a year earlier.

The placement data (see table) include pullet chicks sold during the month, plus the number of pullet chicks expected from eggs sold during the preceding month.

The conversion from eggs to expected pullet chicks was made on the basis of 125 pullet chicks per case of hatching eggs sold. The primary breeders included in this report account for a very large percentage of total supply of replacement pullets for broiler hatchery supply flocks. Sales of replacement pullets by these breeders provide an indication of the potential number of pullets available for addition to hatchery egg supply flocks several months before the pullets will actually move into the flocks.

Pullet Chicks* Placements for Broiler Hatchery Supply Flocks (Reported by leading breeders)

Month	Total			Domestic			
	1958	1959	1960	1958	1959	1960	1960 as % of 1959
	thousands						
January	1,982	2,124	1,657	1,842	1,884	1,496	79
February	2,281	2,414	2,114	2,162	2,256	1,947	86
March	3,132	3,450	2,946	2,997	3,209	2,674	83
April	3,331	3,765	3,452	3,234	3,573	3,215	90
May	3,641	3,007	3,788	3,522	2,861	3,530	123
June	3,409	2,575	3,539	3,234	2,392	3,304	138
July	3,071	2,408	2,339	2,892	2,279	2,113	93
August	2,668	1,834		2,486	1,706		
September	2,718	1,727		2,546	1,480		
October	2,585	2,121		2,473	1,994		
November	2,153	1,842		2,048	1,697		
December	2,165	1,704		2,004	1,605		
Annual total	33,136	28,971	—	31,440	26,936	—	—

*Includes expected pullet replacements from eggs sold during the preceding month at the rate of 125 pullet chicks per 30 doz. case of eggs.

Pillsbury to Put New Eight-Bin Feed Unit Into Service Aug. 22

CLINTON, IOWA—A new eight-bin feed unit, designed to place 20 tons of feed into a truck in two minutes, will be put into operation here by The Pillsbury Co. feeds division Aug. 22.

Eight 20-ton bins are located on a superstructure over a 60 ft. truck scale.

The entire operation will be completely automatic, according to Richard Koll, production manager. It will be operated from a panel board inside the plant.

There will be micro switches on the gates. As contact is made, lights will turn on indicating that there is a clear path for the feed. Lights also will indicate that the valves are operating properly. "There is no chance for error," said Mr. Koll.

Each scale is equipped with a Printomatic dial, Mr. Koll points out. As the truck drives on the scale, the scale will record the tare weight. As each kind of feed is received, its weight will be recorded and the total recorded. All eight bins are equipped with indicators, and a horn signal will indicate when they are filled to capacity.

The bins will load at the rate of about 45 tons an hour, says Mr. Koll. The entire system is air operated with no racks or pinions.

Court to Decide Fate Of Arkansas Railway

By Special Correspondent

HARRISON, ARK.—The Interstate Commerce Commission will hold a hearing in the Federal Building here Aug. 25 on a request by the Arkansas & Ozarks Railway for authority to abandon its 70-mile system.

The railroad—considered by many to be vital to the north Arkansas poultry and livestock industries—has been inoperative since a flash flood destroyed some of its trackage last May.

Local businessmen have attempted to force the line back into operation, but the A&O contends it has been losing money steadily for the past five years.

Feed dealers joined other shippers in a suit seeking a temporary injunction against closing of the line. However, a federal judge ruled against the injunction, saying it did not come under the authority of his court.

The Arkansas Commerce Commission has joined shippers in protesting the proposed abandonment.

Agricultural officials feel the line is an important part of the large scale regional poultry industry. It formerly moved much of the bulk feed used in supplying the area's poultry producers.

Golf Tourney Set

ST. JOSEPH, MO.—The St. Joseph Feed, Seed, Grain & Fertilizer Club has announced plans for a golf tournament Aug. 30 at the Moila Golf Course. Participants will tee off between 1 and 2:30 p.m.

Golfing will be followed by a cocktail hour at 6 p.m. and dinner at 7. Joe Joffe, Dannen Mills, Inc., is chairman of the event.

Export News Sparks Soybean Meal Prices

Word that 10,000 tons of 44% protein meal had been sold for export injected the soybean oil meal market with a price spurt late this week. The spark moved the item out of a hole and erased an early-in-the-week loss of about $2 ton. At week's end, soybean oil meal prices were about even with those of a week earlier.

Traders were anxiously awaiting next week's monthly Census Bureau report which will give meal production for July and processor stocks as of the turn of the month. This report, they believe, could afford some possible cue as to what to expect on meal prices for the very near future.

Supplies of most feed ingredients were more than adequate in many areas this week. Prices continued on the lowering side as farmers entered the heavy harvest season and began to turn livestock into stubble fields.

Soybean meal appears to be the only major item to have recovered from middle-of-the-week levels which reflected price reductions on bran, middlings, tankage and meat and bone meal. Slight price increases were reported for corn gluten feed and alfalfa meal.

Millfeed prices were whittled down in a rather vicious way during the week. Demand was draggy and offerings were heavy.

Feeds: Average Bulk Prices and Index of Weighted Prices* (Dollars Per Ton)

	Aug. 16, 1960	Aug. 9, 1960	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	57.30	59.20	—1.90
Cottonseed meal	59.95	60.80	— .85
Linseed meal	63.25	63.50	— .25
Copra cake or meal	62.25	67.00	—4.75
Peanut meal	53.75	55.00	—1.25
Index	76.2	78.2	—2.0
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	73.20	73.90	— .70
Tankage	71.40	72.10	— .70
Fish meal	89.25	89.25	...
Index	66.0	66.4	—0.4
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed and meal	44.00	43.60	+ .40
Dist. dried grains	54.60	54.35	+ .25
Brewers dried grains	40.20	39.35	+ .85
Index	70.9	70.2	+0.7
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	36.25	38.50	—2.25
Middlings and shorts	37.10	40.10	—3.00
Index	66.2	71.0	—4.8
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	42.70	43.20	— .50
Rice bran	30.00	29.00	+1.00
Index	65.3	65.6	—0.3
ALFALFA MEAL			
Prices at prin. mkts.	46.30	46.45	— .15
Index	89.1	89.4	—0.3
MOLASSES, FEEDING			
Prices at prin. mkts.	22.57	22.68	— .11
Index	67.2	67.5	—0.3
ALL FEEDSTUFFS			
Index	71.8	73.7	—1.9
FEED GRAINS			
Prices at prin. mkts.:			
Corn	41.20	41.00	+ .20
Oats	42.40	43.70	—1.30
Barley	39.80	39.70	+ .10
Grain sorghums	35.75	35.70	+ .05
Index	65.6	65.5	+0.1

*Base period of index is 1947-49.
Source: USDA.

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Predicts Possible Rise in Prices for Soybeans, Products

MINNEAPOLIS—Soybean and soybean products markets will follow an erratic pattern in the next 30 days and prices may move into higher ground, L. R. Brewster, manager of operations control for the oilseeds division of General Mills, Inc., observed this week.

"With this being an election year, political campaign talks are apt to influence the markets regularly, with the next 30 days being very important to the growing soybean crop," Mr. Brewster said. International incidents will contribute to the erratic pattern, he believes.

Soybean oil has been carrying the load for the processor in recent months, Mr. Brewster said, and from all indications the oil produced from 88 million bu. of beans (the U.S. Department of Agriculture's July-September crush estimate on July 1) will "find a home" without much trouble. Domestic interest continues fairly good and export demands have not shown any signs of slowing down, he added.

"Current soybean and soybean oil prices are in higher ground now than anticipated a few months ago," Mr. Brewster said, "but soybean oil meal is touching on the low for this crop year." Mr. Brewster pointed out figures covering the over-all situation and tried to picture what's in store for the remainder of the crop year.

	Bushels
1959 estimated production	537,895,000
Soybean stocks Oct. 1, 1959	63,350,000
	601,245,000
New crop beans processed in September, 1959 (estimated)	16,166,000
Total soybean supply Oct. 1, 1959	585,079,000
Processed October-June	301,856,000
	283,223,000
Exported October-June	114,028,000
	169,195,000
Used for seed (estimate)	31,000,000
Stocks (per formula) July 1, 1960	138,195,000
Stocks (per USDA) July 1, 1960	136,507,000
Variance	1,688,000

Let's take the USDA figure of 136,507 000 bu. on July 1 and see what will become of that supply.

	Bushels
July, August, September crush estimate	88,000,000
July, August, September export estimate	25,000,000
Total July-September disappearance	113,000,000
July 1 stocks	136,507,000
Carryover Oct. 1, 1960	23,507,000

"Please note that this carryover takes into consideration the fact that 16,166,000 bu. of 1959 crop beans were processed last September," Mr. Brewster noted. "If you add this to the above carryover on Oct. 1, 1960, you will see that we approached the 40 million bu. carryover which most analysts have been making reference to in recent months. With the new crop as late as it is at this time, the Oct. 1 stocks will probably not be much more than 25 million bu."

On the basis of the 88 million bu. crush estimate, there should be about 2 million tons of meal produced plus the June 30 stocks of 112,000 tons, making a total of 2,112,000 tons of meal available up to Sept. 30, or an average of 704,000 tons per month, he said. The average consumption for the first nine months of this crop year has been 759,000 tons, while the May and June usage has been 742,500 tons, he noted. "It would appear that the supplies may be somewhat under the demand for the last quarter," said Mr. Brewster. "As a result, meal prices now should be on the bottom and could easily show improvement by late August or early September."

Springfield Milling Names Nutritionist

SPRINGFIELD, MINN. — Springfield Milling Corp. has announced the appointment of Charles F. LeFevre as nutritionist for the firm.

C. F. LeFevre

Prior to joining Springfield Milling, Mr. LeFevre was assistant director of nutrition for International Milling Co. A graduate of South Dakota State College where he majored in animal husbandry, he earned his master's degree in animal nutrition from the same college.

Moorman Appoints Secretary, Treasurer

QUINCY, ILL. — Moorman Manufacturing Co. here has announced two executive promotions, according to E. H. Wilson, president. Douglas A. Dulaney has been named secretary and Richard A. Liebig has been named treasurer.

Mr. Liebig will also act as co-trustee of the Moorman Manufacturing Co. Employees Profit-Sharing Fund. These offices were formerly under the direction of the late Claude Holmes.

Mr. Dulaney, a 28-year Moorman veteran, has worked in the stockroom, as secretary to the office manager, as cafeteria manager and as assistant manager in the traffic and purchasing departments. For 20 years he has been assistant manager of the accounting department and will take on his new duties as secretary in addition to his regular accounting work. Mr. Dulaney was an original member of the committee which studied the advisory board formation, was on the original advisory board and is currently serving a second term. He is secretary-treasurer of the Moorman Fund and assistant treasurer of the Moorman Foundation. He is a member of the National Association of Accountants.

Mr. Liebig is a native Quincian and a graduate of the University of Illinois. He came with Moorman Sept. 12, 1949, as a credit correspondent and July 7, 1958 was made credit manager. Mr. Liebig has been secretary of the administrative committee of the profit-sharing fund for three years.

Mr. Wilson, in announcing these two changes, said, "As our company grows and broadens, we recognize that similar expansion in our general administration activities is both desirable and necessary. We have already made considerable progress along this line."

Three Executives Promoted by ADM

MINNEAPOLIS — Promotion of three executives in Archer-Daniels-Midland Co.'s grain division was announced this week by Ralph Bruce, vice president and manager of the division.

E. L. (Ned) Brown II was named manager of wheat operations, with responsibility for that phase of the company's business, including procurement of wheat for the flour milling division.

Frank Seidl, Jr., assistant vice president, was placed in charge of the company's barley operations. He also will continue as manager of the specialty oats department.

Fred C. Olson was appointed manager of all coarse grain operations, with responsibility for the acquisition and merchandising of soybeans, flaxseed, corn, oats, rye and screenings.

They will handle the export as well as domestic phases of ADM's operations in these various commodities.

Robin Hood Buys Canadian Firm to Expand Supersweet

MONTREAL — Robin Hood Flour Mills, Ltd., manufacturer of Supersweet Formula Feeds, has purchased the fixed assets of Milton Milling Co., Ltd., Milton, Ont.

Supersweet poultry and animal feeds have been distributed throughout Quebec and the Atlantic provinces and with the acquisition of the Milton plant, Robin Hood will expand distribution of Supersweet to Ontario.

The firm was reported to have chosen Milton because of the heavy production of eggs, poultry, pork and dairy products in the area serving the larger metropolitan centers of Ontario.

Robin Hood reported that it has plans for modernizing and enlarging the existing facilities.

Milton Milling Co., which sells animal and poultry feeds under the name "Starlight" has been in the milling business since 1818 when the Martin family built its original mill in Milton. The business has been operated by the Martin family for 142 years. Dr. C. A. Martin, grandson of the founder, will be available in an advisory capacity to Robin Hood.

Robin Hood has been established in Canada for over 50 years and has expanded its operation to keep pace with the expanding economy of the country.

"The Milton feed plant will be a great asset in the company's plan for a wider market for Supersweet Feeds for poultry and livestock," Robin Hood officials said.

Castro Okays Seizure Of Ralston Purina Plant

ST. LOUIS—Prime Minister Fidel Castro of Cuba has signed papers authorizing the seizure of the Ralston Purina Co. plant in Havana, according to R. Hal Dean, president of the international division of the firm.

The company has about $750,000 invested in the facilities established in August 1958.

The plant has been closed since mid-June, following exhausting of the Cuban company's cash. The government, the plant's sole customer, had not paid its bills. Cuba's National Institute of Agrarian Reform took over the country's poultry production in April and by mid-June owed Ralston Purina's subsidiary $325,000.

Ralston Purina also found it impossible to operate under a new order limiting the price of feeds to 15% more than raw material cost. This meant that wages and costs had to be paid out of the 15% margin, a smaller than normal amount, Mr. Dean said.

The company has continued to pay its workers even though the plant is not operated, in order to avoid giving the Cuban government an excuse to seize the plant. Payment has been out of the small amount paid by the government for feeds previously delivered.

Ralston Purina's plant is one of the few apparently not yet expropriated.

In an apparent effort to find an excuse for intervention, the company's records have been audited by Cuban officials. But they were found to be in good order, Mr. Dean commented. Earnings of the Cuban operations had been retained for expansion of the operation and nothing had been paid to the parent company.

ASSISTS 4-H DAIRY SHOW

AUBURN, MAINE — Kennard A. Carter, head of the Carter Milling Co. here, manufacturer of mixed feeds for livestock and poultry, has presented a check to K. C. Lovejoy, Orono, state 4-H club leader, to help defray expenses of the Maine 4-H Dairy Show.

Cargill, Inc., Leases Extra Storage Space For Bulk Molasses

OMAHA, NEB.—Four million gallons of tank storage space, part of an industrial alcohol plant bought recently by Aaron Ferer & Sons Co. from the U.S. government, has been leased to Cargill, Inc.

The storage will be used as a receiving and merchandising depot for bulk molasses to supply midwest animal feed manufacturers, according to Ace R. Cory, the company's local manager.

Mr. Cory said the arrangement supersedes plans announced this spring to build storage for 2.5 million gallons adjacent to the Omaha Dock Board grain elevator operated by Cargill. "Our earlier plans were drawn before we learned the alcohol plant would be sold and its storage made available. We are now able to stock almost twice as much molasses, and can begin stockpiling and merchandising the product considerably earlier," he said.

First quantities of molasses are scheduled to arrive from the firm's import terminal in Baton Rouge, La., about Sept. 1.

Harvey D. Ferer, president of the Omaha company that recently paid $300,000 for the 11-building, six-and-a-half-acre property, said that roughly 20% of the plant's area is involved in the Cargill acquisition. Clearing of machinery, equipment, salvage materials and scrap from the remaining 80% will ready it for lease and occupancy by other firms.

Molasses, bought from Louisiana and Caribbean producers, is used to make roughage feeds more palatable and nutritious for livestock, and as an ingredient in pelleted formula feeds.

Mr. Cory said pumps, steam lines and other equipment will be installed at the new depot. Efficient pumping requires raising temperatures of the product to 100 or 110° F. so it can be delivered by truck and unloaded without further heating, he pointed out.

Large Egg Supply Light; Others Heavy

NEW YORK — Lighter available supply of large and increased offerings of mediums and smaller sizes at some points were the features of the egg market for the week ending Aug. 17, the U.S. Department of Agriculture reports.

An unsettled price situation prevailed in most producing areas on broilers and fryers, and trading in frozen ready-to-cook turkey showed only a comparatively small gain.

On the west coast, trading was active on eggs at all levels. Offerings were frequently short of full trade needs, USDA said.

At some midwestern points, an increase in available supply of mediums resulted in moderate price declines, but large met with improved demand, despite higher price levels, especially where quality was fully representative of grade offered. Prices paid at the farm in Iowa for Grade A large rose from 25@31¢ the previous week to 27@34¢ for the week ending Aug. 17. Medium and small prices remained the same. Chicago delivered price for mixed large was up a cent to 33½@34½¢, while mediums were off 2¢. Grade B offerings increased.

Northeast markets were irregular with large browns meeting excellent demand. At southeastern markets, increased influence of lighter available supply and widespread shortages of larger sizes and good demand resulted in price advances of 1@2¢. An increase in arrivals from the Midwest was noted.

The commercial egg movement report showed a 1% decline in receipts from farmers. The frozen and dried

(Turn to EGG MARKET, page 98)

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FEED MANUFACTURER'S TEST #78	12,000	$ 6.55
COLLEGE TEST #82	600	$21.85
COLLEGE TEST #83	150	$22.58

BASIS: market price of broilers 16¢ per lb.; feed cost 4½¢ per lb.; zinc bacitracin 7¢ per gram.

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The Effect of Phytic Acid and Other Organic Factors On Zinc Utilization by the Growing Pig

"Research Results Show: (1) Naturally Occurring Phytic Acid in Soybean Protein Reduces Availability of Zinc or Interferes with Its Metabolic Function, and (2) Source of Oil or Fat, Protein and Phytic Acid Affects Zinc Requirement of Growing Swine."

By M. P. Plumlee, D. R. Whitaker, J. H. Conrad, W. H. Smith, H. E. Parker and W. M. Beeson

Purdue University

Recent research at Purdue with swine (Smith, et al., J. Ani. Sci. 18:1513) and elsewhere with chicks (O'Dell and Savage, Fed. Proc. 16: 394) has shown that the zinc requirement of both species varies with the source of protein in the diets. The requirement when either soybean oil meal or purified soybean protein was fed was much higher than when animal sources supplied most of the dietary protein. When soybean protein was fed, 46 p.p.m. (p.p.m. ÷ 2.2 = mg./lb.) of elemental zinc was required to promote optimum growth and feed efficiency and to prevent all symptoms of parakeratosis. Rations in which the protein was supplied by commercial casein, dried skimmed milk or vitamin-free casein and which contained 18, 16 and 16 p.p.m. of zinc, respectively, were adequate in zinc.

Other workers have shown that approximately 70% of the phosphorus in soybean protein is in the form of phytic acid. Phytic acid is a chelating agent which has been suggested to be involved in mineral absorption in single-stomached animals.

Two experiments were conducted to see if the poor utilization of zinc by swine fed soybean protein diets was due to the phytic acid in the soybean protein.

EDITOR'S NOTE: *Research reported here, from Purdue University Agricultural Experiment Station Mimeo AS 285, is the result of the combined efforts of the authors. All except H. E. Parker are members of Purdue's department of animal science. Dr. Parker is on the staff of the department of biochemistry.*

Their research for this article was supported by a grant-in-aid from the Distillers Feed Research Council, Cincinnati, Ohio. The authors express their appreciation to Dr. J. R. Couch, Texas A&M College, for furnishing the isopropanol-insoluble residue of distillers solubles; to Corn Products Co., Argo, Ill., for the phytic acid solution, and to Calcium Carbonate Co., Quincy, Ill., for the zinc analyses.

EXPERIMENTAL — Each experiment consisted of six treatments with six pigs per treatment. The pigs were approximately three weeks of age and weighed an average of approximately 11 lb. at the start of the feeding period. Two pigs were assigned to each pen. All pigs were raised on concrete at the Livestock Experimental Farm prior to transfer to the Animal Unit of the Life Science Building for the experimental phase. Each pig received a 2 cc. injection of Armidexan at three days of age.

All rations were fed ad libitum in galvanized metal feeders, and "soft" water was provided in glass-lined waterers. A zeolite water softener was used to demineralize the drinking water. The pens were concrete floored with galvanized metal partitions. One-half of the floor space in each pen was covered with a wood platform and the pens were hosed down daily.

Semipurified rations containing either soybean or casein as the protein source were fed (see Table 1). All rations contained approximately 20% protein, 0.67% calcium and 0.50% phosphorus. No more than a two-weeks' supply of each ration was mixed at any one time. Feed and weight records were kept weekly and each pig was observed daily for the appearance of symptoms of parakeratosis.

Experiment 1 — The experimental treatments were:

Treatment 1 — Soybean protein basal + 30 p.p.m. zinc.

Treatment 2—Soybean protein basal + isopropanol-insoluble residue of 5% distillers dried solubles + 30 p.p.m. zinc.

Treatment 3 — Soybean protein

(Turn to page 14)

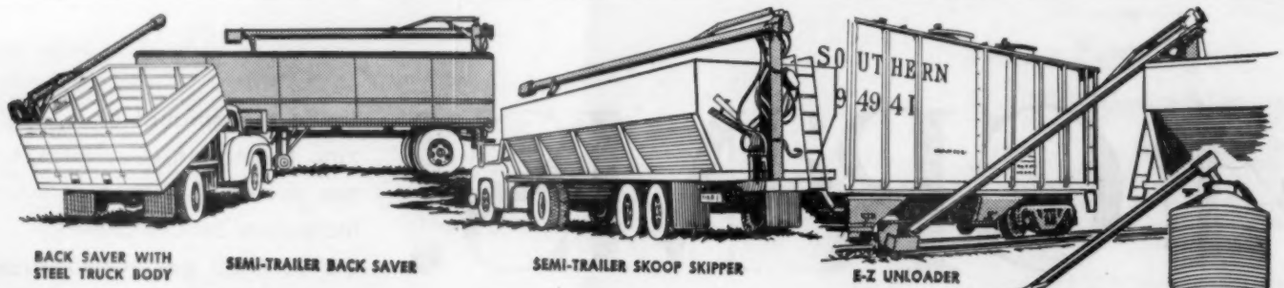
TABLE 1. Basal Rations for Experiments 1 and 2

Ingredient	Soy-Basal	Casein Basal
Soybean protein, purified	25.00	....
Casein, commercial	....	23.39
Cerelose (corn sugar)	30.91	31.84
Corn starch	30.91	31.84
Soybean oil	5.00	5.00
Celluflour	3.00	3.00
DL-methionine	0.25	0.00
Minerals, major*	4.00	4.00
Minerals, trace†	0.19	0.19
Choline chloride, 70%	0.181	0.181
Vitamin mixture‡	0.559	0.559
Total	100.00	100.00

*The major mineral mixture provided 0.5% salt, 0.67% calcium, 0.50% phosphorus and 0.42% potassium.

†The trace mineral mixture supplied the following in milligrams per pound of ration: Cobalt, 0.2; copper, 3.0; fluorine, 4.9; iron, 32.6; magnesium, 182, and manganese, 18. In addition, zinc oxide was added to the soy basal to supply 13.6 mg., 30 p.p.m., of zinc per pound of ration.

‡The vitamin mixture supplied 3, 4, 15, 10, 1.5, 4, 0.1, 50, 2, 50, 1 and 15 mg. per pound of thiamine, riboflavin, niacin, calcium pantothenate, pyridoxine, para aminobenzoic acid, biotin, inositol, folic acid, ascorbic acid, vitamin K and mixed tocopherols, respectively. Also, the vitamin mixture provided 20 mcg. of B_{12}, 200 I.U. of vitamin D_2, 200 I.U. of D_3 and 2,000 I.U. of vitamin A per pound of ration.



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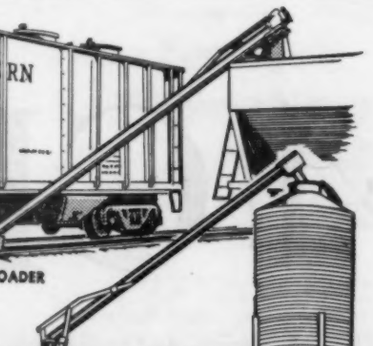

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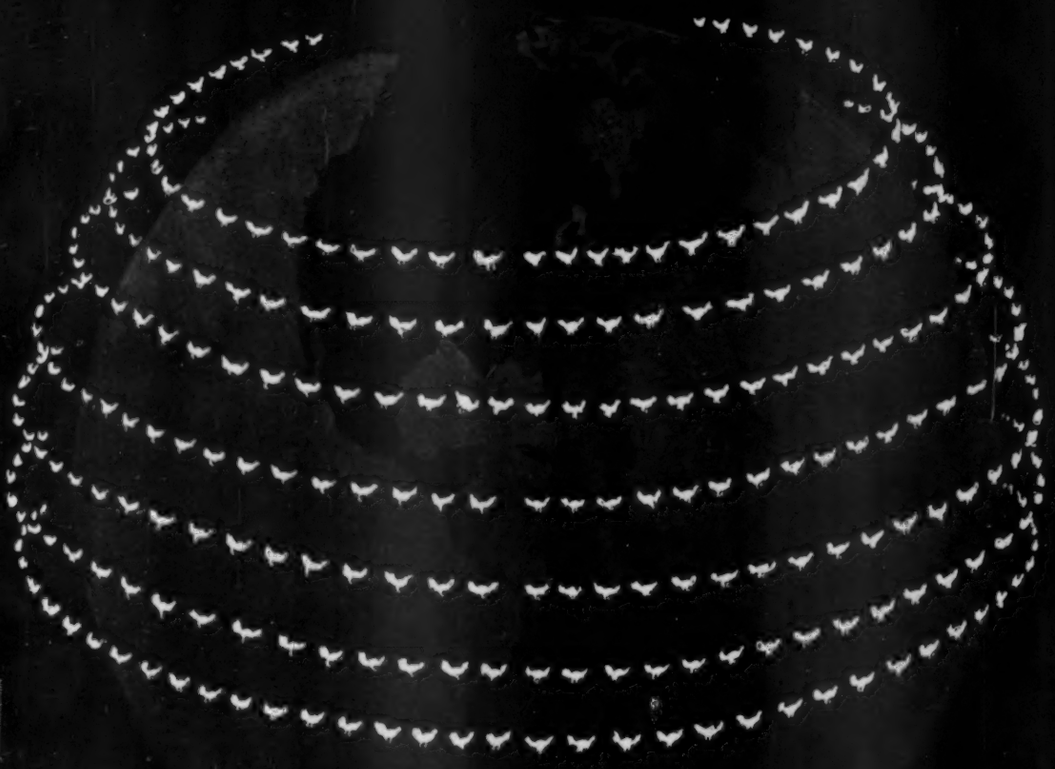

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TABLE 2. The Effect of Phytic Acid, Zinc, Protein and Distillers Dried Solubles on Growing Pigs. Experiment I, Depletion Phase
(Six pigs per lot—fed 49 days)

Lot No.		Average Initial Wt.	Average Final Wt.	Average Daily Gain	Average Daily Feed	Feed Per lb. Gain	Parakeratosis, No. of pigs
		lb.	lb.	lb.	lb.	lb.	
1	Isolated soybean protein basal ..	11.05	34.71	0.48	1.21	2.51	3
2	Basal + isopropanol-insoluble extract of 5% DDS†	11.20	29.29	0.37	1.24	3.35	6
3	Basal + 5% DDS	11.03	41.62	0.62	1.39	2.22	2
4	Commercial casein basal	11.05	50.92	0.81‡	1.48	1.82	0
5	Basal + phytic acid solution ..	11.15	28.46	0.35§	0.95	2.68	6
6	Basal + phytic acid solution + 5% DDS	11.12	27.42	0.33§	1.02	3.08¶	6

Basal rations calculated to contain the following: Protein, 20.25%; calcium, 0.67%; phosphorus, 0.47%, and potassium, 0.41%. The zinc content of rations 1 through 6 upon analysis contained: 50.2, 41.9, 40.6, 21.6, 21.9 and 32.1 p.p.m., respectively.
†Distillers dried solubles.
‡Significantly lower at the 1% level than Lot 1.
§Significantly lower at the 1% level than Lot 4.
¶Significantly lower at the 5% level than Lot 4.

basal plus 5% distillers dried solubles + 30 p.p.m. zinc.

Treatment 4—Casein basal.

Treatment 5 — Casein basal + 1.525% of a phytic acid solution (40% phytic acid).

Treatment 6 — Casein basal + 1.525% of a phytic acid solution (40% phytic acid) + 5% distillers dried solubles.

Zinc oxide was added to the isolated soybean protein rations but not to the casein rations. As fed, the soybean protein rations (1, 2 and 3) contained 46 p.p.m. and the casein rations (4, 5 and 6) contained 18 p.p.m. of zinc. The phytic acid added in treatments 5 and 6 was calculated to be equal to the amount supplied by the soybean protein in treatments 1, 2 and 3. The soybean protein contained 0.69% phosphorus, 70% of which was in the form of phytin.

At the end of the 49-day depletion period, treatments were changed as shown in Table 3. These repletion treatments were fed for 28 days.

Experiment II — The experimental treatments were:

Treatment 1—Soybean protein basal + 100 p.p.m. zinc.

Treatment 2—Soybean protein basal + 100 p.p.m. zinc + isopropanol-insoluble residue of 5% distillers dried solubles.

Treatment 3—Soybean protein basal + 100 p.p.m. zinc + 5% distillers dried solubles.

Treatment 4—Casein basal.

Treatment 5 — Casein basal + 1.525% of a phytic acid solution (40% phytic acid).

Treatment 6 — Casein basal + 1.525% of a phytic acid solution + 100 p.p.m. zinc.

The total zinc content of rations 1, 2, 3, 4, 5 and 6 was 116, 116, 116, 18, 18 and 118 p.p.m., respectively.

At the end of the 56-day depletion period, four of the most severely parakeratotic pigs from Lot 5 were reallotted into two groups of two pigs each for the 14-day repletion period (see Table 5).

SUMMARY OF RESULTS — The results of Experiment 1 are summarized in Tables 2 and 3; of Experiment 2 in Tables 4 and 5.

Experiment I — 1. Pigs performed better on the casein-protein ration which contained 18 p.p.m. of zinc than on the soybean protein ration which contained 46 p.p.m. zinc (Lot 1 vs. Lot 4).

2. The addition of phytic acid, in amounts equal to the natural phytic acid content of soybean protein, to the casein basal ration resulted in even poorer performance than on the soybean basal.

3. Phytic acid additions to the casein basal resulted in the development of severe parakeratosis typical of a zinc deficiency in swine.

4. The two cases of parakeratosis on the soybean basal containing 46 p.p.m. of zinc were unexpected based on previous experiments and were perhaps due to the switch from corn oil to soybean oil as the source of fat in this trial.

5. The addition of 5% distillers dried solubles to the soybean protein basal ration resulted in a slight non-significant increase in rate of gain and appetite. However, the isopropanol-insoluble residue of 5% distillers dried solubles slightly reduced pig performance. The casein basal ration was not affected by the addition of 5% distillers dried solubles.

6. During the repletion phase, the removal of phytic acid from the ration (Lot 5) or the addition of 100 p.p.m. of zinc to the phytic acid containing ration (Lot 6) markedly improved appetite, rate of gain, feed efficiency and severity of parakeratosis.

7. Also, the addition of 100 p.p.m. of zinc to the 5% distillers dried solubles (Lot 3) increased performance on the soybean basal to equal that of the casein basal.

8. Likewise, a switch from soybean oil to corn oil (Lot 2) as the source of fat resulted in marked improvement in appetite, gain and feed efficiency.

Experiment II—1. Again, as in the previous experiment, the addition of phytic acid to the casein basal ration resulted in a marked reduction in growth rate, appetite and feed efficiency as well as the development of severe zinc deficiency symptoms in five of the six pigs (Lot 4 vs. Lot 5).

2. The addition of 100 p.p.m. of zinc (Lot 6) to the casein basal markedly reduced the phytic acid effect but did not overcome it entirely.

3. The zinc deficiency symptoms noted in animals on the soybean protein diets in Experiment 1 were prevented by increasing the zinc content of the diets from 46 to 116 p.p.m.

4. The addition of 5% distillers dried solubles to the soybean basal ration (Lot 3) improved appetite, rate of gain (significant at 5% level) and feed efficiency, but the isopropanol-insoluble residue of 5% DDS was without effect.

5. In the repletion phase the addition of either 100 p.p.m. of zinc or 500 p.p.m. of EDTA to the casein-phytic acid ration increased rate of gain and appetite and caused a rapid improvement in zinc deficiency symptoms.

These results clearly indicate that: (1) The naturally occurring phytic acid in soybean protein reduces the availability of zinc or interferes in some manner with its metabolic function, and (2) the source of oil or fat, protein and phytic acid affects the zinc requirement of growing swine. There is a possibility that milk proteins contain a factor or factors which enhance the utilization of zinc by swine.

TABLE 3. The Effect of Source of Oil and Zinc in Alleviating Parakeratosis Experiment I, Repletion Phase
(Six pigs per lot—fed 28 days)

Lot No.		Avg. Initial Wt.	Avg. Final Wt.	Avg. Daily Gain	Avg. Daily Feed	Feed Per Lb. Gain	No. of Parakeratotic Pigs Initial	Final
		lb.	lb.	lb.	lb.	lb.		
1	Isolated soybean protein basal	34.88	55.25	0.73	2.36	3.25	4	3
2	Basal except 5% corn oil	35.08	60.33	0.90	2.41	2.68	4	3
3	Basal + 100 p.p.m. zinc*	35.58	79.67	1.58†‡	3.51	2.23	3	2
4	Casein basal + phytic acid ..	50.92	93.75	1.53†‡	3.51	2.29	0	0
5	Casein basal	28.46	72.83	1.58†‡	3.03	1.91	6	1
6	Basal + phytic acid + 5% DDS + 100 p.p.m. zinc	27.42	71.17	1.56†‡	3.14	2.01	6	4

*Zinc added as zinc oxide.
†Significant at 1% level from Lot 1.
‡Significant at 5% level from Lot 2.

TABLE 4. The Effect of Phytic Acid, Protein, Zinc and EDTA on Growing Swine Experiment II, Depletion Phase
(Six pigs per lot—fed 56 days)

Lot No.		Average Initial Wt.	Average Final Wt.	Average Daily Gain	Average Daily Feed	Feed Per lb. Gain	Parakeratosis, No. of Pigs
		lb.	lb.	lb.	lb.	lb.	
1	Isolated soybean protein basal ..	10.58	47.67	0.66	1.58	2.39	0
2	Basal + isopropanol-insoluble extract	10.63	47.75	0.66	1.57	2.39	0
3	Basal + 5% DDS	10.58	58.58	0.86†	1.93	2.26	0
4	Commercial casein basal	10.52	66.25	1.00‡	2.14	2.15	0
5	Basal + phytic acid	10.56	28.33	0.32§	1.03	3.24§	5
6*	Basal + phytic acid + 100 p.p.m. zinc	10.98	59.90	0.87	1.81	2.22	0

The zinc content of rations 1 through 6 calculated to be 116, 116, 116, 18, 18 and 118 p.p.m., respectively.
*Lot 6 consisted of five pigs. One pig died during the trial from intestinal edema.
†Significantly higher at 5% level from Lots 1 and 2.
‡Significantly higher at 1% level from Lots 1 and 2.
§Significantly lower than all other lots at 1% level.

TABLE 5. The Effect of Zinc and EDTA in Alleviating Parakeratosis in the Presence of Phytic Acid. Experiment II, Repletion Phase
(Two pigs per lot—fed 14 days)

Lot No.		Avg. Initial Wt.	Avg. Final Wt.	Avg. Daily Gain	Avg. Daily Feed	Feed Per Lb. Gain	No. of Parakeratotic Pigs Initial	Final
		lb.	lb.	lb.	lb.	lb.		
1	Casein basal + phytic acid + 100 p.p.m. Zn*	24.25	39.25	1.07	1.88	1.76	2	1
2	Casein basal + phytic acid + 500 p.p.m. EDTA†	26.75	42.50	1.12	2.07	1.84	2	1

*Zinc added as zinc oxide.
†EDTA added as free EDTA ((ethylenedinitrilo) tetraacetic acid disodium salt).

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Former Executive of Spencer Kellogg Dies

BUFFALO, N.Y.—Joseph E. Johnson, 64, former manager of the soybean oil meal department of Spencer Kellogg & Sons, Inc., died Aug. 4 at Ormond Beach, Fla.

Mr. Johnson joined Spencer Kellogg in September, 1928, and was with the firm for 23 years. Among the positions he held were manager of distributor sales and western division sales manager.

In 1935, when Spencer Kellogg & Sons, Inc., entered the soybean industry, Mr. Johnson was assigned to organize and head a newly-created soybean division in Chicago. Later, he was transferred to Decatur, and then promoted to the home office at Buffalo as manager of the soybean oil meal department. He held this position until 1952 when he retired because of ill health.

Mr. Johnson was a former chairman of the trading news committee of the National Soybean Processors Assn. and was active in this group in the infancy of the soybean industry.

American Cyanamid Promotes Dr. Ware

NEW YORK — The promotion of Dr. J. H. Ware to the position of director, product laboratory, Agricultural Division, American Cyanamid Co., has been announced by Dr. J. T. Thurston, manager of research and development for the division. Effective immediately, Dr. Ware's new responsibilities will involve physical and chemical formulation studies of experimental chemicals and drugs for plant and animal use, and analytical procedures for proving the safety, effectiveness and stability of all Agricultural Division products.

Dr. Ware was formerly assistant to the manager of research and development. He joined American Cyanamid Co. in 1955 after receiving his Ph.D. in biochemistry from the University of Arizona.

AFMA Forms 2 New Units, Adds To Existing Ones

CHICAGO — Two new committees have been formed and 30 new members have been appointed to existing committees of American Feed Manufacturers Assn., according to Dean McNeal, AFMA board chairman, and executive vice president the Pillsbury Co.

The new groups are the additives committee and the legislative committee and were authorized by the AFMA board of directors at their recent annual meeting. According to Mr. McNeal, the additives committee will work on many problems resulting from the enactment of the Food Additives Amendment of 1958. "These include," he said, "the use of certain feed medicaments, legal interpretations and Food and Drug Administration administrative and enforcement policies and practices. Where problems are mutual, this committee will work closely with suppliers of medicated feed products and with other organizations."

The legislative committee, according to Mr. McNeal, will be concerned largely with legislative problems other than those dealing with feed control. In addition, this group will keep abreast with any state or federal regulations that might be proposed or issued which could directly or indirectly affect the feed industry.

Members of the additives committee include: Walter A. Glista, Wirthmore Feeds, Inc. (chairman); W. W. Cravens, McMillen Feed Mills, Inc.; E. D. Griffin, Allied Mills, Inc.; S. F. Kern, Eli Lilly & Co.; J. T. Redwine, The Quaker Oats Co.; Leroy Schilt, Ralston Purina Co., and Edward Woolman, Hales & Hunter Co.

The legislative committee membership includes: J. D. Sykes, Ralston Purina Co. (chairman); B. D. Eddie, Superior Feed Mills; Warren Ranney, Cooperative G.L.F. Exchange; I. S. Riggs, The Quaker Oats Co.; Henry C. Tilford, Jr., Dixie Grain Co.; Everett W. Turner, The Grange Co., and Steele Wright, Texas Farm Products Co.

The new convention program committee, appointed by Mr. McNeal, includes the following members: Paul E. Newman, Beacon Milling Co., Div. Spencer Kellogg & Sons (chairman); Donn D. Early, The Early & Daniel Co.; G. A. Ensminger, Albers Milling Co.; F. Tyler Kniffin, Clyde Milling Corp.; Robert R. Spitzer, Murphy Products Co.; Sid Wieser, Wieser Mills, Inc., and Chase Wilson, Consumers Cooperative Assn.

New members appointed to other AFMA committees by Mr. McNeal include the following:

Feed control relations—Warren A. Armstrong, Nutrena Mills, Inc.; C. W. Klinger, McMillen Feed Mills, Inc., and M. W. Watts, Allied Mills, Inc.

Industry advisory committee to the feed survey committee — Damon V. Catron, Walnut Grove Products Co., Inc.

Market research committee—Dale Butz, Illinois Farm Supply Co.; Charles E. Erickson, Nutrena Mills, Inc.; F. T. Heffelfinger II, F. H. Peavey & Co.; Phillip F. Sisson, The Pillsbury Co., and Carl W. Sturhahn, Moorman Manufacturing Co.

Public relations committee—Ernest J. Neill, Merck & Co., Inc.; Gardner C. Norcross, United Cooperative Farmers, Inc.; A. L. Powell, The Pillsbury Co.; Herbert L. Schaller, Chas. Pfizer & Co., Inc., and John L. Schlick, Murphy Products Co. William Pearce, Cargill, Inc., is the new chairman, and William C. Murphy, Eli Lilly & Co., is the new vice chairman.

Committee of purchasing agents executive committee — Edwin H. Durr, Golden Eagle Milling Co.; Clyde Lott, Dannen Mills; Clarence Merkel, Moorman Manufacturing Co.; Keith Morgan, Jackson Grain Co., and E. G. Young, Illinois Farm Supply Co.

Executive traffic committee—G. R. Heckman, Hales & Hunter Co.; H. N. Johnson, Ralston Purina Co.; R. L. Sprunger, McMillen Feed Mills, Inc., and Charles F. Witmyer, John W. Eshelman & Sons Co.

New Vice President For Milk Specialties

DUNDEE, ILL.—Ray Van Poucke, formerly vice president in charge of sales, Ames Reliable Products Co., Ames, Iowa, has joined Milk Specialties, Inc., here in the capacity of executive vice president. He will also serve on the board of directors of the firm, according to announcement by William F. Oatman, president.

Ray Van Poucke

At Milk Specialties Mr. Van Poucke will be involved in directing the company's efforts to develop and promote milk product formulations for all classes of livestock and pets. Milk Specialties baby animal food formulations for calves, swine, horses and dogs are now distributed on a national basis.

Mr. Oatman said that Mr. Van Poucke's experience in the field of nutritional research as well as technical service and sales management will enable Milk Specialties to be of greater service to its customers and the industry.

Previous to Mr. Van Poucke's employment at Ames he had served as vice president in charge of sales for Midwest Dried Milk Co. here. In addition to his duties at Milk Specialties, he will resume his association with Midwest.

ELEVATOR SOLD

BAKER, ORE. — Haines Commercial Elevator Co. has been sold by E. C. Miley and G. M. Witney of Athena to a new firm of Morrow County men. Purchasers are Al Lamb, manager, Morrow County Grain Growers, Lexington; W. E. Melina, grain mill contractor and builder, Ione, and H. D. McCurdy, Jr., assistant Morrow County Grain Growers manager, Lexington. Name of the operation will be changed to Haines Grain & Feed Co. The business will be managed by the same personnel.

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You supply us your formula and we will produce the new expanded type dog food—or, if preferred, we will also furnish the formula.

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Cattle Group, Firm In Buying Program

By Special Correspondent

SUNNYSIDE, WASH. — A new buying program for animal health products and feed additives is being operated jointly by the Washington Cattle Feeders Assn. and Wall Brothers, Porterville, Cal., in which Wall Brothers acts as a purchasing agent and distributor.

John MacGregor, Hooper, president of the association, said Wall Brothers had been operating in Washington on a small scale with a salesman covering the territory from Wall's office in southern Idaho.

"It looked as if we could help each other, so we approached Kermit Wall with a proposition," Mr. MacGregor said.

The association owns an office and storage building at Sunnyside.

"The association furnished office and storage space in Sunnyside, clerical help and entry to customers, and Wall provided us with a small above-cost deal," said Mr. MacGregor.

Max Wickham, general manager of the Wall subsidiary, Northwest Livestock Supply Co., Twin Falls, Idaho, presently is running this new operation.

"We're feeling our way along on this so far," said Mr. Wickham, "and the program has worked out extremely well for the association and its members to date. Of the 100 members or so in the association, fully 90% are participating in the program."

Included in the arrangement are feed additives, vaccines, antibiotics, other veterinary supply items and also feedlot equipment such as squeeze chutes, gate hardware, feeders and related items.

Mr. MacGregor said the arrangement permits not only a price reduction to association members, but also a small rebate to the association "which helps defray office costs." He added that "the better prices have helped bring in some new members."

Eugene Schott Horace Hutto

Salt Firm Appoints New Sales Manager

MINNEAPOLIS — One industry veteran has succeeded another as Minneapolis regional sales manager of Diamond Crystal Salt Co.

The new manager is Eugene G. Schott, formerly assistant to the company's Chicago regional sales head. He has 21 years of Diamond Crystal service.

Mr. Schott succeeds Horace C. Hutto, who has retired after 38 years with the firm.

Mr. Hutto was recently honored at a retirement dinner in Minneapolis attended by Charles F. Moore, company president, top company sales executives and Minneapolis regional personnel.

Diamond Crystal's Minneapolis region covers the states of Minnesota, Wisconsin, North Dakota and Iowa.

Allied Mills Executive Dies of Heart Attack

CHICAGO — Charles L. Mitchiner, 51, director of stores and a member of the general sales office staff of Allied Mills, Inc., died suddenly of a heart attack Aug. 13. Burial was at Hinsdale, Ill., where he resided.

Mr. Mitchiner came with Allied Mills in 1933, shortly after being graduated from the University of Tennessee. He worked as an assistant in the Colonel district sales office in the southern area until he entered service in the U.S. Navy during World War II. He served on the staff of Admiral Halsey. He held the rank of captain in the U.S. Naval Reserve at the time of his death.

He was merchandising manager of the stores division of Allied Mills at Fort Wayne, Ind., from 1946 until 1958, at which time he was transferred to Fort Worth, Texas, in charge of warehouses in that region. In September, 1959, he was transferred to Chicago as a part of the general sales office in charge of company-owned stores and warehouses.

USDA Announces Dried Egg Purchase

WASHINGTON—The U.S. Department of Agriculture has announced purchase of 919,425 lb. of dried whole egg solids at a cost of $1,050,400. The eggs will be delivered to states for distribution to needy persons and other eligible outlets.

The price paid this week was $1.1425 lb. for carload lots of egg solids packed in No. 2½ consumer-size cans. USDA accepted bids from all of the 10 bidders, who together offered 1,009,125 lb.

These purchases bring total purchases to 5,785,650 lb. at a cost of $6,595,400 since resumption of the program June 22. Section 32 surplus removal funds finance the program.

Announcement

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as of September 1, 1960

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SCIENCE IS REVEALING SOME STARTLING FACTS ABOUT HOW MUCH SWINE WORMS COST YOU...

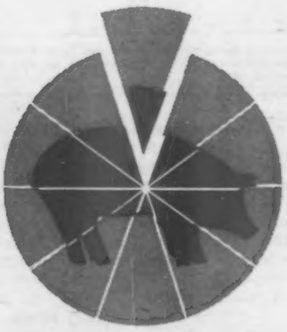
A 7-10% feed loss is expensive...here's why

Old methods of worm control offered only partial relief. Hygromix, which kills more kinds of worms and gives continuous, day-by-day in-feed control, is furnishing a direct measurement of worm-damage losses ... damage which results in 8% slower gains, 5 to 6% loss in feed efficiency.

Everyone has always known that worms are costly to hog raisers. Only recently, measurements have been made which can be directly translated into dollars and cents. Up to the discovery of Hygromix, we have had to rely upon estimates.

For instance, in 1954 the U.S.D.A. estimated that each hog raiser was, on the average, suffering a loss of around $3.00 per pig due to internal parasites.

More recently, the University of Wisconsin made a study of 101 hogs slaughtered by a leading meat-packing plant. All of the hogs were graded by veterinary inspection and classified as "normal, healthy" swine. Yet, when the researchers probed the internal organs of these hogs, they hand-counted *an average* of 463 worms per hog. Damage? It was easily seen. The question was, how much did worms cost the men who fed those hogs?



7-10% LOSS IN FEED

The unseen drain on profits

Dr. A. C. Todd, Veterinary Parasitologist at the University of Wisconsin, made this educated estimate: Most hogs that might be called normal and healthy experience a 7 to 10% feed loss in nourishing worms of various kinds ... in spite of being treated for worms once, or even twice, with purge-type wormers.

His estimate has since been supported by tests conducted at seven agricultural experiment stations to help track down this hidden drain on hog-raising profits. Their tests were made under different conditions, and for different lengths of time. Hogs which received Hygromix in their feed were compared with hogs fed identical rations without Hygromix.

Here is a summary of their results: Where worms were *continuously* controlled with Hygromix there was an 8.1% increase in daily gain during the recommended feeding period, on 5.7% less feed.

HYGROMIX SWINE-FEEDING DATA FOR THE GROWING PERIOD

STATION	% Increase Daily Gain	% Decrease Feed Required
Ohio (Drylot)	10.2	6.5
Ohio (Pasture)	6.3	0.7
Nebraska (Drylot)	7.9	7.6
Nebraska (Pasture)	12.0	3.0
Purdue (Drylot)	11.5	5.3
Purdue (Concrete & Soil)	1.0	2.6
Purdue (Concrete)*	8.9	0.3
N. Carolina (Concrete)	-8.9	6.6
N. Carolina (Pasture)	0.0	7.0
S. Dakota	12.6	8.4
Uni. of Alberta*	15.2	6.8
Uni. of Alberta	24.7	12.6
Michigan State	3.7	6.2
AVERAGE	8.1	5.7

*Pigs in these lots were wormed once with purge-type wormer.

What worms cost an average hog raiser

A 7 to 10% loss in feed can represent quite a loss to the average hog raiser. Figured on the basis of a 4:1 feed-conversion ratio, it takes 800 lbs. of feed to get a pig to 200 lbs. Using the low figure of a 7% feed loss from worms means a loss of 56 pounds of feed per pig. A man raising just 100 pigs a year could lose 5600 pounds of feed ... almost three tons!

Hygromix feed: continuous protection against the loss

Worms and worm damage lower feed efficiency, slow gains, and depress the general health level of the herd. Hygromix in the feed controls swine worms daily by killing large roundworms, nodular worms, and whipworms as they enter the intestinal tract ... before they can lay new worm eggs to reinfest lots, pens and pastures.

Thus, day after day, Hygromix feed protects young hogs when hidden worm damage causes the most trouble and the greatest loss. With Hygromix, hogs protect themselves against worms every time they take a bite. Feeds with Hygromix are the only way hog raisers can insure themselves against daily worm damage.

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Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

Values from Experiments Recently Reported in the May, 1960, Issue of Poultry Science, Vol. 39, No. 3.

1. Studies of the Metabolizable Energy of Grain and Grain Products for Chickens.

•F. W. Hill, D. L. Anderson, R. Renner and L. B. Carew, Jr., Cornell University, pp. 573-579.

2. The Metabolizable Energy of Soybean Oil Meals, Soybean Mill Feeds and Soybean Hulls for the Growing Chick.

•F. W. Hill and R. Renner, Cornell University, pp. 579-583.

3. Metabolizable Energy of Feed Ingredients for the Growing Chick.

•L. M. Potter and L. D. Matterson, University of Connecticut, Storrs, pp. 781-782.

ABSTRACT AND COMMENT

In spite of the obvious limitations of the metabolizable energy system for use in practical poultry rations as recently pointed out by the Ontario workers and reviewed in this column Aug. 6, 1960, many nutritionists still prefer this method of calculation of rations. Research in more accurate methods of determination of metabolizable energy is constantly expanding as is also the determination of more energy contents for a greater variety of ingredients.

In a table to the right is a summary of the values as determined by the workers at Cornell and Connecticut as listed in the most recent issue of Poultry Science. As new values are published they will also be listed in this column for informational purposes.

●

Timely and Worth Noting

•W. D. Pounden, H. A. Frank, Ohio Agricultural Experiment Station, Journal of the American Veterinary Medical Assn., Vol. 137, No. 1, pp. 53-57, July 1, 1960. "Further Observations on Mastitis in Cows Fed Legume Grass Forage as Soilage and Silage."

•Authors as above, also, J. H. Vandersall, Journal of Dairy Science, Vol. 43, No. 6, p. 864, Abs. 55th annual meeting. "Mastitis and Estrogenic Activity."

Previous reports from this group of workers have indicated that attacks of mastitis were far more prevalent in milking cows fed freshly cut forage than in those groups fed the same feed in the form of silage. The first of the current reports extends the preliminary research conducted during 1957, and gives the results for 1958 and 1959.

It is quite apparent from the data that freshly cut legume forage again tended to stimulate the occurrence of attacks of mastitis to a greater extent than the same forage fed in the form of silage. Also, there was no difference in incidence with one daily cutting of the soilage as compared with twice-a-day harvesting, and permitting at least one feeding to go through a partial wilting and heating process.

An attempt was made to correlate the type of organisms present to the type of forage fed, but further work is necessary before real trends can be determined as to which organisms are responsible for the greater incidence on soilage.

Second Report

The second report from this group showed that the forages consumed by cows sometimes appeared to lower the resistance of milk samples to the activity of mastitis-producing bacteria. Forage content of estrogens appeared to be related to this problem as those containing estrogenic substances caused greater incidence. Diethylstilbestrol in low concentrations was found to stimulate the growth of some mastitis producing bacteria, even though it was inhibitory in higher concentrations.

Over one half of the mastitis attacks in 188 examined cows occurred in the period beginning one month post-freshening and ending when the animals were pregnant one month. It is during this period that estrogenic influences would be expected to be high.

Among the 64 cows for which complete estrus records were available, the number of attacks was greatest during the seven-day period between the third and ninth days post-heat. These days are those in the period within the estrous cycle during which estrogenic activity is considered to be at the highest levels.

Is it possible that the small amounts of extra estrogen activity contained in some forages are actually enough to cause trouble? We need more research on this important subject.

Metabolizable Energy Values (From Poultry Science)

Ingredient	Cornell Air-Dry Basis Range	Cornell Air-Dry Basis Avg. Value	Connecticut Air-Dry Basis Range	Connecticut Air-Dry Basis Avg. Value
Grains:				
Barley, ground	1233-1377 (5)	1282		1130
Yellow corn	1496-1683 (5)	1557	1535-1694 (10)	1620
Mahogany corn		1539		
Corn, ground white, degermed, dehulled		1630		
Milo		1476		1530
Oats	1107-1260 (2)	1184	1090-1190 (2)	1140
Oats, hulless		1539		
Oats, rolled		1449		
Pearled barley		1125		
Rye, tetrapetkus		1296		
Wheat, all analyses	1449-1539 (5)	1492		1320
Wheat, hard	1449-1521 (2)	1485		
Wheat, soft	1485-1539 (2)	1512		
Wheat, frosted		1467		
By-products and miscellaneous:				
Bread meal				1640
Corn gluten meal		1503		1440
Cerelose		1470		
Corn oil			3980-4030 (2)	4005
Corn mill feed		1467		
Distillers dried grains, corn				740
Distillers dried grains, with solubles, corn			990-1180 (3)	1110
Distillers dried solubles, corn				1340
Fermentation product, antibiotic			370- 420 (2)	405
Fish meal, menhaden (62-64% protein)			1110-1360 (2)	1240
Hominy feed		1350	1250-1510 (2)	1380
Meat and bone scraps (44% protein)				810
Soybean oil meal (44% grade)	950-1110 (10)	1017	970-1080 (6)	1020
Soybean oil meal (50% grade)	970-1220 (10)	1130	1030-1140 (8)	1090
Soybean millfeed (13% protein)		350		
Soybean millfeed (16.7% protein)		567		
Starch				1680
Sucrose				1670
Tallow, fancy No. 1 beef			3170-3210 (2)	3190
Wheat flour				1390
Wheat red dog flour		1242		
Wheat flour middlings		1197		
Wheat standard middlings		810	780-1140 (3)	960
Wheat bran		513		
Whey, dried				860
Yeast, brewers' dried				840
Roughages:				
Alfalfa meal (15% protein)				290
Alfalfa meal (18.5-19.0% protein)			480- 510 (2)	495
Barley hulls (9.2% protein)		458		
Barley hulls (2.0% protein)		252		
Corn cobs		243		
Oat hulls		144		
Soybean hulls		5		

NOTE: Certain values have been adjusted from published figures to a comparative basis of 10% moisture basis for all ingredients, except corn, which is calculated at 15% moisture. Wherever possible, figures have not been rounded off.

Maine Poultrymen Hail 1st All-Water Grain Shipment

AUGUSTA, MAINE — A new era has dawned in northern New England grain transportation with receipt of the first shipment over an all-water route from the Midwest by Lipman Poultry Co.

The event was hailed by Maine poultry producers, who voiced high hopes that they will now be able to overcome a competitive disadvantage in freight rates with other states, particularly those in the Southeast.

The Lipman firm received 2,500 tons of corn on the barge Agnes Connor, one of three leased by the company, after a 16-day trip from Toledo, Ohio. The cargo went down the New York barge canal to New York City and up the coast to the Kennebec River.

Reporting the barge shipment cost at between $5 and $7 a ton, compared to $11.40 by rail, Frank Lipman, president of the poultry concern, said "the only advantage the Southeast has in chicken and egg production has been in the feed cost to producers."

The price difference is strictly in transportation, he pointed out, adding that "the $4@5 ton we pay extra is the only advantage they have on us."

LOSES ARM IN ACCIDENT

PLATTEVILLE, WIS.—A 13-year-old boy lost his left arm recently when he reached into a mixer at the feed mill operated by Melvin Andrew at Arthur, nine miles north of Platteville. The boy, Merle Vacha, was later reported in satisfactory condition at the Platteville Municipal Hospital. The accident occurred when the boy dropped a broom handle into the feed mixer and reached into the machine for it.

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Exhaustive feeding tests confirm availability

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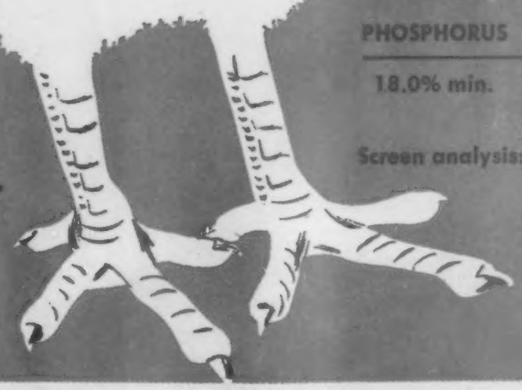
CDP (Coronet Defluorinated Phosphate) has proven high phosphorus availability as recognized by State Agricultural Experiment Stations and unaffiliated research laboratories. Results of nutritional tests are available upon request.

Proven high biological availability in CDP is assurance that you are buying usable phosphorus . . . that can be directly absorbed and easily converted to meat, eggs and milk.

CDP . . . through exhaustive feeding tests at independent laboratories . . . PROVES . . . not merely claims . . . high phosphorus availability.



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Screen analysis: All through 14 mesh, 80% on 200 mesh, plus or minus 5%.

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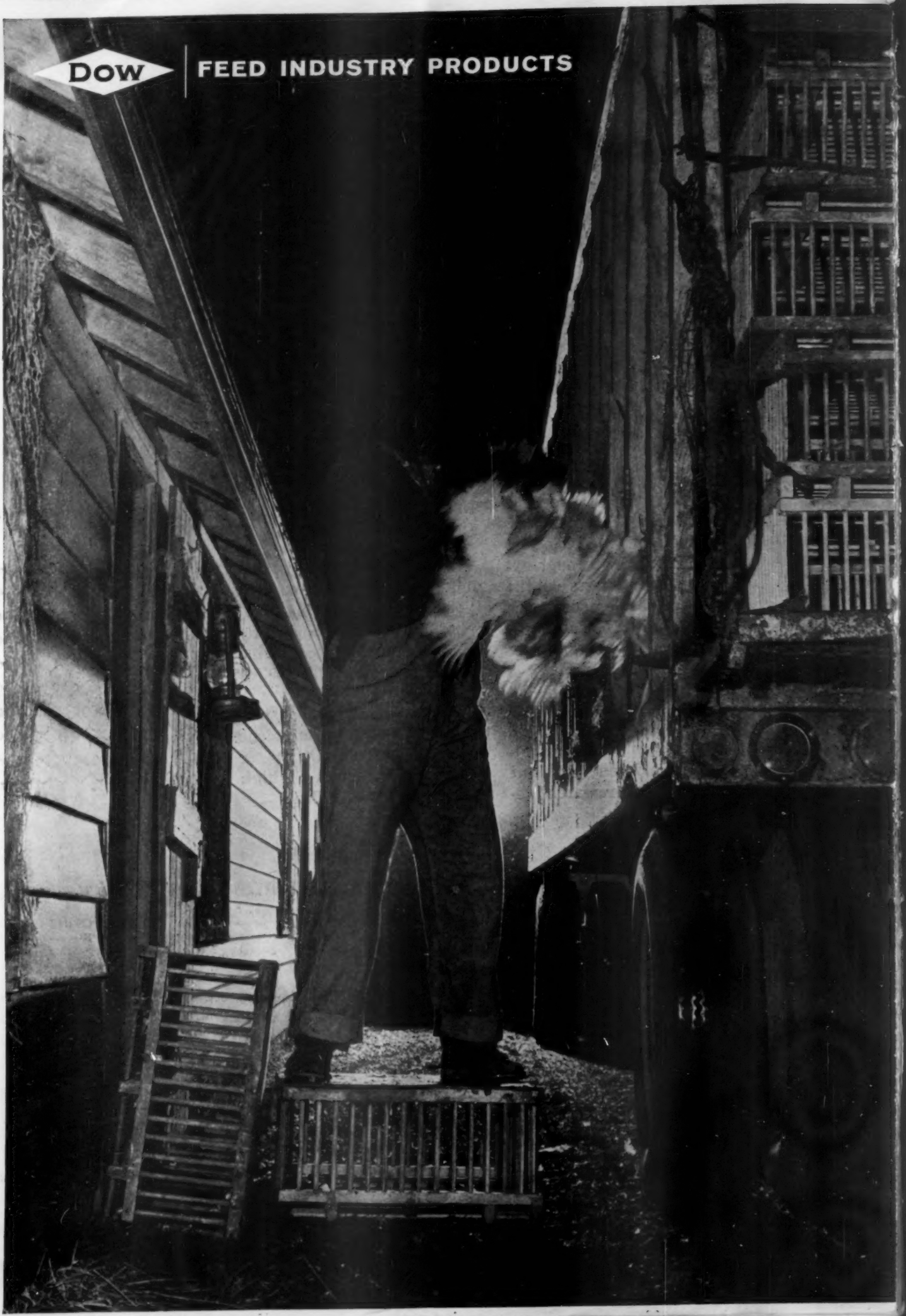
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ZOAMIX®

gives growers approved coccidiosis control right up to market time!

New development in coccidiostats requires no withdrawal period . . . won't harm layers or farm animals, if accidentally eaten . . . provides the best protection against all types of coccidiosis!

Zoamix containing Zoalene added to your feed formula gives broilers better protection against coccidiosis, allows greater feed efficiency, allows faster weight gains, *plus* an extra margin of safety available in no other coccidiostat!

Zoamix has been approved for feeding to broilers right up to the time they are shipped to the market! That means no withdrawal period, no need to switch to a new feed formula prior to shipment, and the grower can act fast to market his birds at the most profitable time.

Zoamix will not injure laying hens and other farm animals if accidentally fed to them. It's safe to mix with any chick starter or broiler mix without affecting the ingredients, nutrients, or other additives in the formula. It's safe for mill workers or growers to handle.

And best of all, Zoamix is unexcelled as a coccidiostat. In fact, feed manufacturer's research laboratory tests show Zoamix is superior to eight of nine leading coccidiostats . . . and equally as effective as the other one—yet superior to that one in feed conversion and rate of gain, as shown in the following table:

RATE OF GAIN AND FEED CONVERSION COMPARISONS

	Zoalene* Compared with Following Coccidiostats	A	B	C	D	E	F	Totals
	Number of Comparative Tests	29	15	16	23	5	6	94
NUMBER OF TESTS IN WHICH	Zoalene Superior for Weight Gains	28	14	16	14	5	6	83
	Other Coccidiostat Superior for Weight Gains	1	1	0	8	0	0	10
	No Difference in Weight Gains	0	0	0	1	0	0	1
	Zoalene Superior for Feed Conversion	26	10	14	15	2	6	73
	Other Coccidiostat Superior for Feed Conversion	1	2	2	7	2	0	14
	No Difference in Feed Conversion	2	3	0	1	1	0	7

*the active ingredient in Zoamix

Zoamix is available now in commercial quantities at centrally located points throughout the country. Write Dow for assistance in labeling, or for technical help. The address: THE DOW CHEMICAL COMPANY, Agricultural Chemicals Sales Department, Midland, Michigan.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

Say Dry Lot Feeding of Cows Cheaper Than Pasture or Green Chopped Hay

BROOKINGS, S.D. — Reports of research conducted by the agricultural research station of South Dakota State College indicate that:

- It's less expensive to dry lot feed dairy cows than it is to pasture them or feed them green chopped hay every day.
- It makes more sense to mechanize dairy feeding operations today than it ever did before.
- Losses of dairy calves from respiratory ailments can be reduced by isolating animals in individual units as a disease prevention measure.

Those research results were disclosed here during a recent Dairy Research Field Day program.

Dry Lot Feeding—Emery Bartle, associate dairyman, reported that animal weight, milk production and labor time all appeared favorable to feeding sealed feed rather than to pasturing or green chopped feeding methods. The trial lasted 81 days.

Weight gain of cows on sealed feed increased 27 lb. during the trial. Those on green chopped feed gained only 8 lb. while those on rotation pasture lost 21 lb. These cows were fed a "liberal" grain feed of a pound of feed for each three pounds of milk produced.

Similar weight differences were also noted under "limited" grain feed conditions: A pound of grain for each 6 lb. of milk production. Cows on sealed feed gained 7 lb., to 3 lb. gain on green chopped feed and a 23-lb. loss on pasture.

Milk Production

Daily milk production of cows increased 0.3 lb. on sealed feed, but lost 0.5 lb. on green chopped feed and lost 1 lb. on pasture under liberal grain feeding. Under limited grain feeding, cows on sealed feed increased milk production daily by 0.4 lb. but lost 0.6 and 2.8 lb. daily on green chopped and pasturing, respectively.

Percentage of waste on sealed feed was also less. Cows on sealed feed consumed 98.5% of the feed but consumed only 92% of the green chopped feed and 83% of pasture feed.

Labor hours spent on each type of feeding were also measured, during the 81 days. Prof. Bartle said it required 109 hours for sealed feed, 111 hours for pasturing—including fixing fences—but 219 hours were required to feed green chopped hay in which the fields were clipped twice daily.

Prof. Bartle observed that better quality could be attained through sealed feeding than the other two methods, since the silo could be filled when the forage was at peak quality.

Mechanized Feeding — Louis Lubinus, extension agricultural engineer, said electricity and electrical equipment are available which "can do things so much cheaper than human labor that it's pricing labor out of the market."

"I don't think too many young fellows are going to stay on a dairy farm and work 80 hours a week for about 70¢ an hour for their work," Mr. Lubinus said.

If a man figures his labor is worth $1 an hour, and if a piece of equipment can save him in labor cost an hour a day, than it will pay him to invest $2,500 in labor-saving equipment, the engineer advised. This is based on 10-year equipment life and 6% interest on the investment.

Mr. Lubinus explained figures showing that complete mechanization from silo to the feed bunk would cost about $2.50 ton for feeding 22 cows, but only $1.25 ton for feeding 66 head, showing a unit cost half as great for the greater volume.

Respiratory Ailments—Death losses were reduced from 20%, in group housing in warm barns, to less than 6%, when calves were housed separately in outdoor hutches, it was reported at the Dairy Research Field Day.

Calves grew faster in the individual units, researchers noted, and required less drug and veterinary care. Fresh air, isolation, sunshine and draft-free conditions of the hutches appeared to be beneficial.

Hay Studies—Research reports on alfalfa haylage, silage preservation, crushed hay and hay drying were among projects reported.

Dairy heifers fed alfalfa haylage tended to gain more weight than those fed green-chopped feed. Cows fed the haylage, also consumed an average of three pounds more of dry matter per day than those fed chopped, artificially-dried hay, researchers said.

Ground corn and molasses appeared to be one of the best preservative combinations, observations from a trial on silage preservation showed.

The value of "crushed" hay as opposed to uncrushed hay was also shown. Consumption of "crushed" hay was higher and milk production was slightly higher than uncrushed hay. Crushed hay appeared more satisfactory when dried in bales than uncrushed hay. Leaf per cent was higher in the crushed hay, also in the fan dried, than in the field dried hay. The crushed hay was about 2% lower in crude fiber and about 1.8% higher in protein than uncrushed hay.

North Carolina Studies Egg Plan

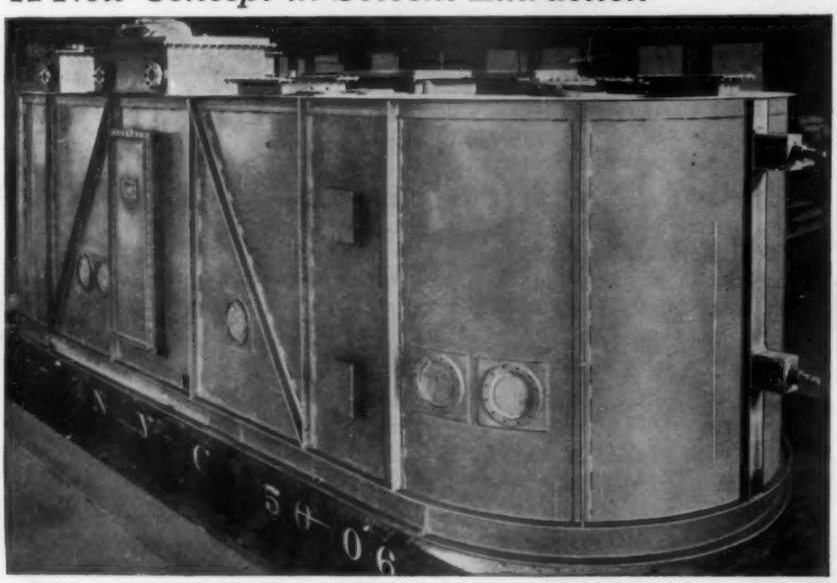
RALEIGH, N.C. — A North Carolina egg marketing program is beginning to take shape. Among the promotions to be studied are programs for egg using and marketing groups, advertising, merchandising programs, cooperative programs with North Carolina State College and the North Carolina Department of Agriculture and newsletters to inform egg producers of activities.

These proposals will be presented to the egg industry in the near future for enactment of a program.

Planning of the program aimed at selling more North Carolina eggs has been done by North Carolina Egg Industry and North Carolina Poultry Council.

ANDERSON HORIZONTAL BASKET EXTRACTOR

A New Concept in Solvent Extraction



The new Anderson Horizontal Basket Solvent Extractor is an advanced technique. With a completely different drive, the design of the Extractor eliminates chains, belts, gearboxes and complicated mechanisms. Constant flow and individual basket supports prevent mechanical stress due to weight of material.

And that's not all. Its simplicity of operation permits complete assembly and thorough testing at the factory—shipped ready to set in place and begin immediate operation. No costly on-the-job fabrications. The miscella discharged from the Extractor is clear and free of all fines without the use of filters.

Operational Data

The Anderson Horizontal Basket Extractor is processing Safflower Seed cake and Linseed cake at the Pacific Vegetable Oil Company, Culbertson, Montana, U.S.A. In this operation, cake is fed DIRECTLY from Prepress Expellers* to the Extractor unit. Results: A residual oil content in the cake of 0.5% or less.

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2. More rapid progress with breeding programs to meet new industry needs, particularly those involved with tomorrow's more specialized merchandising.

3. More resources with which to help you pre-sell your finished product to consumers.

4. A more flexible supply of breeding stock to assure you of what you want when you want it.

5. More efficient use of our breeding by-product to assure you of more for your money in every order of 108s.

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7. Better service wherever you may be.

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10. Better service for our customers in Europe and Latin America.

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You can get your favorite 108s from us in the usual way and also from all Arbor Acres Divisions throughout the country. They are the best 108s we have ever offered. Make the coming year a profitable one with proven 108s, the crossbred female with the hybrid vigor so important to hatcherymen, growers and processors. Order your 108s today . . . call Nichols at President 2-3711, Exeter, N. H.; Parkview 9-3830, Brunswick, Me.; 4941, Greensboro, Ga.; or call any Arbor Acres office. But do it right away!

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Exeter, New Hampshire

IMC Sales Up 10%, Earnings Rise 21%

CHICAGO—International Minerals & Chemical Corp. reports a 21% increase in earnings on a 10% gain in sales for the fiscal year ended June 30.

Record-breaking sales totaled $123,870,000 compared with $112,560,000 last year, the previous peak. Net earnings were $7,481,000 or $3 per share on the 2,365,164 common shares outstanding, compared with $6,189,000 or $2.47 per share last year.

Thomas M. Ware, IMC president, said all divisions of the company operated profitably.

He said expansion and improvement projects which were completed just prior to or early in the 1959-60 fiscal year were important factors in the year's gains.

Mr. Ware said the sales and earnings increases were "especially significant and gratifying since this is the second successive year of marked sales and earnings improvement." Earnings in 1958-59 were up 17% over the previous year on a sales gain of 9%.

Earnings before taxes for the 1959-60 fiscal year were $9,431,000, compared with $7,389,000 the year before.

Dates Set for Liquid Feed Group Meeting

BOONVILLE, MO. — The annual national convention of the Liquid Feed Assn. has been set for Nov. 17-18 in Kansas City by the directors of the group.

Details concerning the meeting and program will be issued later. Among the featured events will be a trade show.

Further information may be obtained from Liquid Feed Assn., Jack von Mettenheim, publicity committee chairman, Princeton, Ill.

Study Feed Outlook In Mississippi Area

STONEVILLE, MISS.—The Delta Agricultural Steering Committee met here to analyze the feed and grazing situation as it now exists following the past few weeks of dry weather.

It was pointed out that unless there is plenty of rain in late summer and early fall, some livestock producers may have to reduce herds.

The committee, made up of district personnel of the Agricultural Extension Service, Soil Conservation Service, and Agricultural Stabilization Committee, will work closely with county steering committees in analyzing county situations.

A united effort will be made in getting more grazing and feed crops planted this fall to help relieve possible feed and hay shortages.

Emphasis will be placed on the planting of both temporary and permanent grazing crops. Oats, wheat and rye grass were recommended as good temporary grazing crops to be planted this fall.

Red clover was recommended as a good companion crop to be used with either of the above plants. The planting of fescue and coastal Bermuda was suggested as permanent grasses well adapted to Delta conditions.

County agents, SCS work unit technicians and ASC office managers will unite in their efforts to get a better job done in planting Coastal Bermuda. It was pointed out that many failures to get stands of Coastal Bermuda were due to improper planting and poor supervision of planting.

County agricultural personnel will study closely county needs for stepped-up grazing programs. It is the consensus of county agents that, with careful management of existing grazing to utilize all possible grass areas such as Johnson grass fields, livestock producers need not get panicky and sell off herds.

It was pointed out that summer fallowing can enable them to get oats and wheat planted earlier. During most winters, oats and wheat can be grazed to good advantage and cut down greatly on cost and amount of feed.

BRITISH TRY GAS ON DISEASED CHICKENS

The British Ministry of Agriculture is investigating the use of lethal gas, the same that is used in the U.S. to execute criminals, for destroying large condemned flocks of poultry suffering from Newcastle disease. Britishers know Newcastle disease as "Fowl Pest," which relieves the town of Newcastle from any impolite implications.

Gas Improves Color Of Broiler Carcass

COLLEGE PARK, MD. — A University of Maryland poultry scientist, Sumner W. Patch, has discovered a technique of using carbon dioxide gas during killing to improve the carcass color of broilers. His findings were presented before the American Poultry Science Assn. meeting in Davis, Cal.

Other advantages claimed for his technique include the cutting of killing time by one half and providing a more humane means of slaughter.

Improving the carcass color improves the quality of the carcass by eliminating red, discolored broilers, a cause of down grading. The red discoloration is due to residual blood remaining underneath the skin. Mr. Patch found, contrary to general belief, that the residual blood remaining under the skin did not disappear when the carcass was chilled.

He investigated the use of other gases, but found no advantage to the use of any other inert gas over carbon dioxide.

Other studies have been done on this problem using carbon dioxide gas before bleeding. The Maryland work differs from previous studies in that the carbon dioxide was given to the birds during bleeding.

This work will have immediate practical value, Mr. Patch says. In fact, work is now in progress in applying the research finding in a poultry processing plant in Maryland.

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ALL-IN-ONE FEEDMAKER

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- Jay Bee-designed, all-weather cornsheller.
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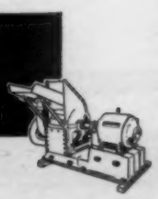

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Morton research has developed the most flexible mixing salt on the market. Containing higher levels of the essential trace minerals for poultry, Morton Poultry Mixing Salt can be used in varying amounts for optimum results from your feeds.

Morton nutritionists have developed this new product to give you better results by more selective use of trace minerals, making it more economical for you to use. Research also has put into Morton Poultry Mixing Salt superior compounds that are all water insoluble, plus a new and improved anti-segregation agent. As a Morton customer, you can be sure that the best in scientific manpower, technical facilities and modern production procedures are always working in your behalf.

In addition to this new Poultry Mixing Salt, Morton also offers Trace-Mineralized, Iodized and Special Mixing Salt . . . each backed by extensive research and testing and available everywhere in the country. For more information about the new and improved Poultry Mixing Salt, or any other Morton Mixing Salt, ask your Morton representative or write:

Morton Salt Research Laboratory, Woodstock, Illinois

MORTON SALT COMPANY

NUTRITIONAL RESEARCH DEPARTMENT
110 No. Wacker Drive, Chicago 6, Illinois

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That's exactly the help you get with the new Laying Cycle Management Program.

It's a complete program that takes your producers' birds from housing right through the laying cycle . . . and puts your feeds in their feeders all the way through.

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• Extra Production Laying Feeds with Terramycin help birds reach and maintain their full production peak by fighting off many production-robbing conditions*. College tests show these feeds with Terramycin can help producers cut costs by 1¢ to 6¢ a dozen.

• At times of severe weather, or other stresses, your laying feeds with high levels of Terramycin can help protect birds from production-robbing problems* that can also lead to disastrous disease outbreaks like CRD. And if disease* does hit, Terramycin's broad-range action gives potent fighting action to get birds back in production fast.

These two feeds, extra production and high level . . . along with good management . . . can help

- Birds reach peak production sooner after laying begins.
- Birds lay more eggs throughout the laying season.
- Birds maintain higher production longer in the laying period.

*Caused by Terramycin-susceptible organisms

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The Laying Cycle Management Program is being carried in the major poultry books and national magazines . . . directly to your laying-feed customers.

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FEED CONTROL COMMENT

By BRUCE POUNDSTONE
Secretary, Association of American Feed Control Officials
Kentucky Agricultural Experiment Station, Lexington

More on Guarantees

In Feed Control Comment appearing in the May 28 issue of Feedstuffs, mention was made of changing the method of guaranteeing trace minerals and antibiotics.

Letters received from both industry and feed officials agree that labeling trace minerals as milligrams would be an improvement over the present percentage system; however, the expressions I have received to date favor listing these in terms of "parts per million."

Suggestion

One feed official suggests using the parts per million up through 9999 ppm. or 0.9999%, and then use percentages for any higher values. He goes on to say that those wanting to use the metric system could convert 1 ppm. to 1 mcg. per gram or 1,000 ppm. to 1 mg. per gram.

He further comments, "By all means we should get away from combining metric and avoirdupois systems, such as milligrams per pound. It is interesting to note that the Food and Drug Administration refers to 110 ppm. (0.0110%) chlortetracycline in the Food Additives Amendment. Of course, FDA still uses grams per ton in the Antibiotic Regulations and insists on grams per pound on feed labels."

A feed manufacturer also supports this view. His letter indicates labeling trace minerals as milligrams "would certainly be an improvement over the present percentage system." He goes on to say however that he, too, would prefer to see such a listing as parts per million. This statement is based upon his experience with "many feed customers." He feels they would prefer the parts per million system. Expressing trace minerals as ratios to the whole "seems to have more meaning."

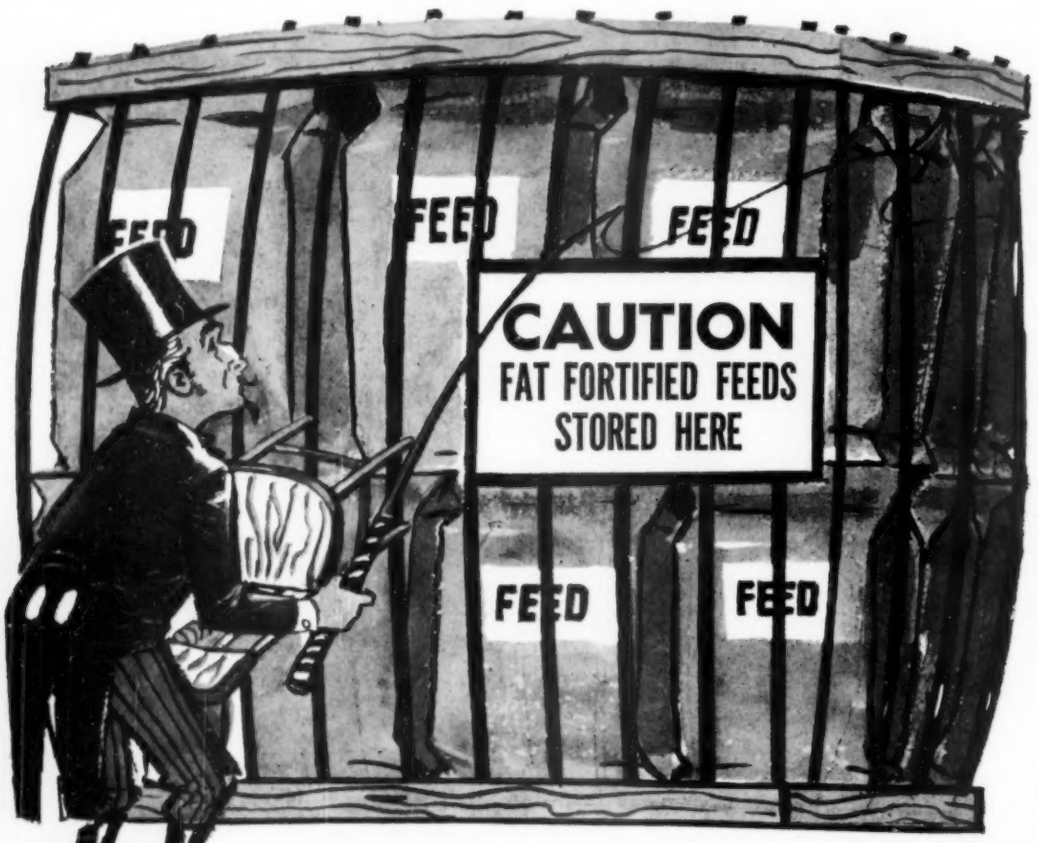
Heavy Response

Judging from the response, this is an item worth thinking about. One of the problems, of course, is the fact that many nutrition experts seem to employ their own systems.

The subject of antibiotic guarantees especially is open to review. The requirement that certain antibiotics must be guaranteed quantitatively even when used at levels less than 50 gm. per ton is inconsistent with the pattern employed in the past where only such guarantees have been required at the more than 50 gm. level.

One way to solve this would be to call for quantitative guarantees wherever growth stimulation can be demonstrated at whatever level is involved.

Perhaps all angles of these questions can be discussed at the meeting in Washington in October. Further suggestions and ideas on this matter will be welcome.



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ANIMAL FAT increases feed efficiency more than any other single ingredient because it contains twice as much energy per pound . . . more than even pure carbohydrates or protein can provide. More efficient energy means more weight gain, lower cost per pound of gain, and increased growth rate for poultry, hogs, and cattle, too!

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Michigan Antibiotic Study Results Told

EAST LANSING, MICH. — When chicks have access to fresh droppings from older birds, their growth rate may be depressed, results of a study at Michigan State University suggest.

If their environment is relatively clean, as would be the case under good management, zinc bacitracin, Aureomycin or Terramycin could well prove to be a valuable addition to the ration, the study indicates.

Fresh hen feces added daily to an all-mash antibiotic-free ration depressed the four-week weights and feed efficiency of broiler chicks.

However, adding dried or autoclaved hen droppings to the feed of the broiler chicks did not depress their growth rate, according to Dr. W. K. Warden, poultry specialist at Michigan State.

This experiment was one of a series of 14 designed to study how and why antibiotics stimulate growth in chicks, Dr. Warden said.

Adding zinc bacitracin, Aureomycin or Terramycin along with the fresh hen feces increased growth rate in each instance. When droppings were not fed, adding the antibiotics produced more nearly the maximum growth potential in the chicks.

Feed Tonnage Sold Rises in Alabama

MONTGOMERY, ALA.—Feed tonnage sold in Alabama for the month of June was up by 5,232 tons from the same month a year ago, the Alabama Department of Agriculture and Industries reports.

The total for the month was 109,938 tons compared with 104,706 tons for June, 1959.

Poultry and dairy feed comprised the major part of the tonnage rise, with dairy feed up from 6,568 the previous June to 8,853 tons this year. Poultry feed was up to 78,970 tons from 76,417 the previous June.

Other feed totals for the month included: Horse and mule feed, 2,118 tons; hog feed, 5,704 tons; oil meals, 1,649 tons; cereal byproducts, 2,273 tons; all other feeds, 8,805 tons and molasses, 1,563 tons.

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Set Iowa Livestock Production Talks

AMES, IOWA—Feed manufacturers, salesmen, county extension directors and high school vocational agriculture teachers from throughout Iowa are expected to attend discussions on new developments in livestock production Sept. 13 on the campus of Iowa State University here.

Dr. Emmit Haynes, Iowa State animal husbandman, said the program will extend into livestock management, reproduction and marketing as well as feeding and nutrition. Dr. Haynes said feed men and educators are recognizing that success with feeds for livestock depends on the over-all handling of the livestock as well as on the nutrients in the feed.

Feed salesmen are called upon to design feeding programs for their customers to fit the actual management and breeding resources on each farm, he commented.

The conference is sponsored by Iowa State University in cooperation with the Western Grain & Feed Assn.; Iowa Feed Dealers Assn., Des Moines; the Feed Institute, Des Moines; and the Midwest Feed Manufacturers Assn., Kansas City, Mo.

Advertising directors and sales managers of feed manufacturers will be among those attending. Dr. Haynes said the meeting will be held at the Iowa State Memorial Union and is open to anyone interested.

Dr. Stanley Balloun, poultry researcher, and Leonard Eggleton of the university will discuss problems of stability of nutrients in quality egg production and marketing.

Dr. R. M. Melampy, breeding researcher, will present information about the reproductive physiology of farm animals which he reported must be understood in order to get best results from feed. Dr. Vaughn C. Speer, swine nutritionist, will report on inter-relationships of nutrition, management and reproduction.

Dr. William S. Monlux of the Iowa State Veterinary Diagnostic Laboratory will report on the inter-relationships of nutrition, management and disease.

Industry representatives on the program will be Marvin Rohlf, nutritionist of the Golden Sun Milling Co., Estherville; C. E. McIlvain, territory sales manager for Nutrena Mills, Inc., Carroll, and Vern Martin, former sales manager of the Maytag Co., Newton.

FILES FOR INCORPORATION

OSKALOOSA, IOWA—Articles of incorporation for the Mahaska Feed & Grain Co., a $150,000 stockholders' corporation, have been drafted preparatory to operation at Oskaloosa of facilities to be constructed and installed at property purchased near the southeast edge of the city. President is Ben P. Groenendyk, Cedar farmer, with Ernest Blom, Oskaloosa, vice president.

Pesticide Residues Hay Parley Topic

DETROIT—Annual convention of the National Hay Assn. will be held at the Sheraton-Cadillac Hotel here Aug. 28 to 30, according to Fred K. Sale, secretary-treasurer. One of the main topics for attention at the meeting will be tolerances allowed on pesticide residues.

Among those on the panel for discussing "Alfalfa Pests; Pesticides and Residue Regulations" will be the chief of the Detroit office of the Food and Drug Administration.

George G. Greenleaf, executive secretary, Ohio Grain & Feed Dealers Assn., will speak on "Creative Initiative in a Competitve Agriculture" and Dr. Robert C. Kramer, director, Agricultural Marketing and Utilization Center, Michigan State University, will speak on "The Importance of Agriculture and Businesses Serving It."

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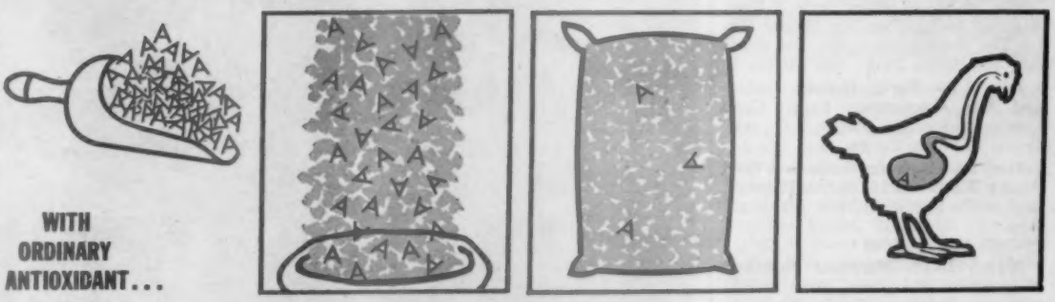
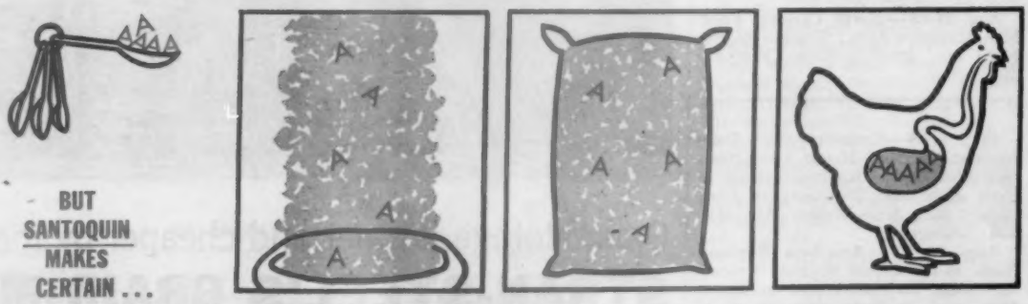


vitamin A disappears fast . . . leaving little for the chicken



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Natural vitamin A *begins* to oxidize in the feedstuff during mixing, *continues* to oxidize in the mixed feed during storage, *oxidizes most rapidly* in the bird's digestive tract. That's why quality feed mills often add *excess* supplementary vitamin A . . . to make sure enough "A" lasts through metabolism. ■Now . . . *Santoquin* stops oxidation of feedstuff vitamin A as soon as you mix it in . . . prevents loss of your feed's vitamin potency *even in the intestine* of the birds. And that's not all. Santoquin acts in the bird just like vitamin E . . . to give sure protection against vitamin deficiency diseases. Santoquin saves the "A" . . . and works like "E"! ■Only ¼ pound per ton does the job. Ask for Santoquin in your dehydrated alfalfa, premixes, and in your concentrates. We'll be happy to send you *all* the facts. *Mail the coupon today.*

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	ORDINARY ANTIOXIDANT	SANTOQUIN
Prevents rancidity in feed	Yes	Yes
Protects vitamin A through digestion and metabolism	No	Yes
Preserves carotenes	No	Yes
Improves pigmentation by guarding xanthophylls	No	Yes
Acts in the bird like vitamin E to prevent diseases	No	Yes

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Convention Calendar

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

Aug. 28-30 — National Hay Assn.; Sheraton-Cadillac Hotel, Detroit; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4, Ind.

Sept. 14—Florida Swine Field Day; University of Florida, Gainesville; H. D. Wallace, Department of Animal Husbandry and Nutrition.

Nov. 17-18 — Liquid Feed Assn.; Kansas City; Jack von Mettenheim, Princeton, Ill.

Nov. 20-22—Western Grain & Feed Assn. of Iowa; Fort Des Moines Hotel, Des Moines, Iowa; sec., Bob Skinner, 401 Shops Bldg., Des Moines 9.

Dec. 6-7 — North Dakota Turkey and Egg Convention; Fargo Civic Center Auditorium, Fargo, N.D.; sec., Irving J. Mork, Fargo.

Dec. 8 — Arizona Grain and Seed Assn.; Westward Ho Hotel, Phoenix; sec., Willis F. Nielson, Box 787, Mesa, Ariz.

1961

March 16-17—Maryland Nutrition Conference; Shoreham Hotel, Washington, D.C.; chm., Dr. R. D. Creek, Poultry Husbandry Dept., University of Maryland, College Park.

Aug. 24-26 — North Carolina Feed Manufacturers Assn.; Virginia Beach, N.C.; sec., McNair Evans, Box 44, Mocksville.

Aug. 22-23—Kentucky Feed Conference; Campbell House, Lexington; sponsored by the Kentucky Grain & Feed Assn. and University of Kentucky; sec., Jack Weber, P.O. Box 425, Lexington.

Aug. 22-23 — American Soybean Assn. and National Soybean Processors Assn., joint conference and meeting; Hotel Peabody, Memphis, Tennessee; George M. Strayer, exec. vice pres., American Soybean Assn., Hudson, Iowa, and R. G. Houghtlin, pres., National Soybean Processors Assn., 3818 Board of Trade Bldg., Chicago 4, Ill.

Aug. 25—Michigan Lamb Feeders Day; Michigan State University, East Lansing; chm., Leonard Blakeslie, professor of Animal Husbandry.

Aug. 26—Purdue Swine Day; Purdue University, Lafayette, Ind.; Dr. J. H. Conrad, Animal Science Dept.

Aug. 29-Sept. 1 — Georgia Poultry Institute; Rock Eagle, Georgia; Milton Dendy, Extension Poultryman, College of Agriculture, University of Georgia, Athens.

Sept. 1 — Illinois State Turkey Growers Assn.; Coe Gaulrapp Turkey Farm, Rock Falls, Ill.; sec., S. B. Swann, Kauffman Turkey Farms, Waterman, Ill.

Sept. 1-6 — International Congress on Nutrition; Sheraton-Park Hotel, Washington, D.C.; sponsored by International Union of Nutritional Sciences; sec., Milton O. Lee, 9650 Wisconsin Ave., Washington 14, D.C.

Sept. 2—Missouri Swine Day; University of Missouri, Columbia; Dr. L. F. Tribble, Animal Husbandry Dept.

Sept. 2 — Illinois Cattle Feeders Day; University of Illinois, Urbana; A. L. Neumann, Animal Science Department.

Sept. 6-9—Feed Microscopy Short Course; University of Missouri, Columbia; chm., G. M. Barnhart, Chief Chemist, State Department of Agriculture, Jefferson City.

Sept. 8-9 — Pet Food Institute; Drake Hotel, Chicago; sec., Clyde Kassens, 333 N. Michigan Ave., Chicago.

Sept. 12-13—Minnesota Animal Nutrition and Health Short Course; University of Minnesota, St. Paul.

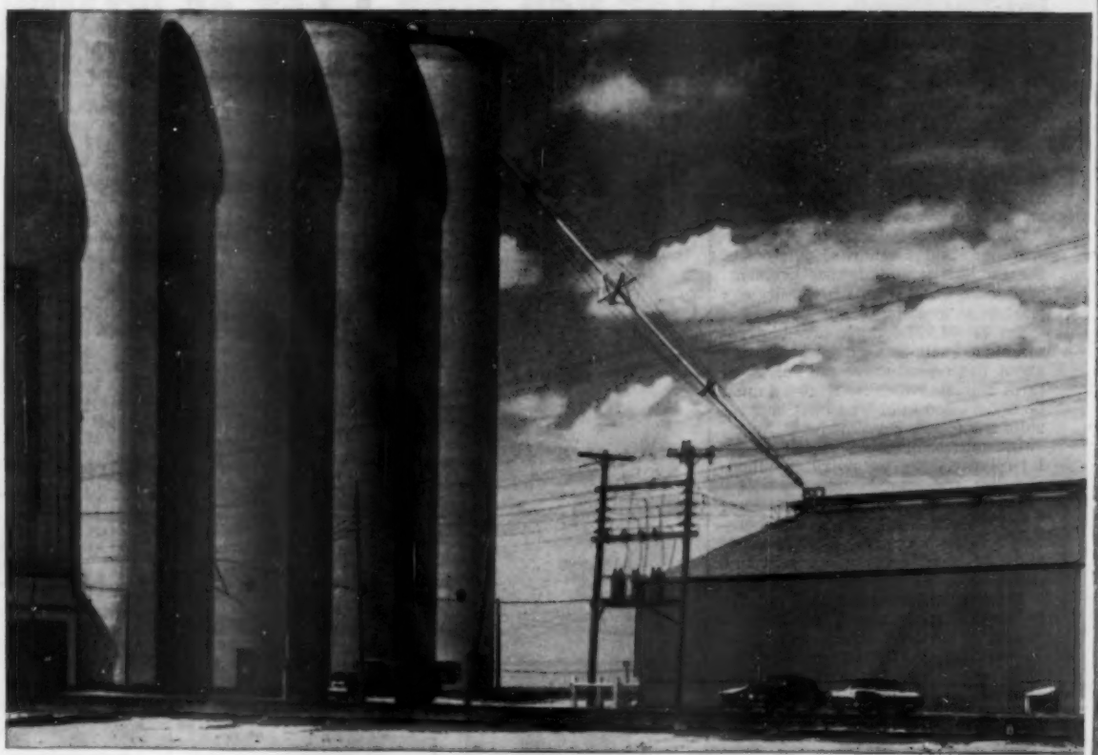
Sept. 13 — Iowa Feed Conference; Iowa State University, Ames; chm.; Dr. Virgil Hays, Animal Husbandry Dept.

Sept. 13-15—Dixie Poultry Exposition; Asheville, N.C.; sec., N. B. Nicholson, Monroe, N.C.

Sept. 13-15 — Hatchery Short Course; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., P. O. Box 568, Columbia.

Sept. 14-15—Maryland Feed Servicemen's Conference; University of Maryland, College Park; chm., Wade H. Rice, Extension Service.

Sept. 14-16—National Feed Ingredients Assn.; Liggetts Holiday Inn, Burlington, Wis.; sec., Paul W. Bonewitz, 1023 Equitable Bldg., Des Moines, Iowa.



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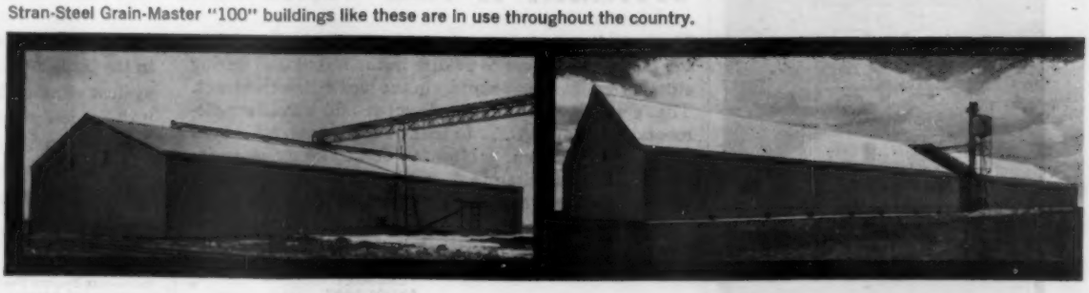

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Sept. 15—All Poultry Industry Day; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Sept. 16—Missouri Egg Day; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Sept. 20-21—Iowa Poultry Convention; Veterans Memorial Auditorium, Des Moines; mgr., LeRoy L. Kruskop, 535 East Lincoln Way, Ames.

Sept. 21-22 — Marketing Seminar for Feed Manufacturers; Morrison Hotel, Chicago; Sales Executives Council, American Feed Manufacturers Assn., W. E. Glennon, president, 53 W. Jackson Blvd., Chicago.

Sept. 21-23—Pennsylvania Millers & Feed Dealers Assn.; Hotel Penn Harris, Harrisburg, Pa.; sec., Donald W. Parke, P. O. Box 329, Ephrata, Pa.

Sept. 21-23 — Feed Production School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 22 — Minnesota Beef-Grass-Meeting; Shoreham Hotel, Washington, D.C.; sec., **Bruce Poundstone,** Feed and Fertilizer Dept., Agricultural **Field Day;** Rosemount Experiment Station, Rosemount, Minn.

Sept. 22-23 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; chm., Dr. E. L. Stephenson, Department of Animal Industry and Veterinary Science.

Sept. 28-29 — Ohio Poultry Assn.; Yough Bldg., Ohio State Fairgrounds, Columbus, Ohio; sec., Bruce R. Davisson, Poultry Dept., Ohio State University, Columbus.

Sept. 29 — Vermont Feed Dealers and Manufacturers Assn.; University of Vermont, Burlington; sec., D. C. Henderson, Hills Agricultural Science Bldg.

Sept. 29-30 — Iowa Seed Dealers Assn.; Savery Hotel, Des Moines; sec., Bob Skinner, 401 Shops Bldg., Des Moines 9.

Sept. 30—Nebraska Feed and Nutrition Conference; University of Nebraska College of Agriculture, Lincoln; chm., Dr. John L. Adams, Poultry Husbandry Dept.

Oct. 2-4 — Poultry Industries of Louisiana, Inc.; Bellemont Motor Hotel, Baton Rouge; sec., **Clyde Ingram, Knapp Hall, Louisiana State** University, Baton Rouge.

Oct. 4-5—Washington Junior Poultry Exposition; Western Washington fairgrounds, Puyallup, Washington; W. R. Jenkins, Extension Poultry Specialist, Agricultural Extension Service, Washington State University, Pullman.

Oct. 4-6 — Northeastern Poultry Producers Council; Exposition and Convention; Onondaga County War Memorial Bldg., Syracuse, N.Y.; Doris Endebrock, Exposition Mgr., 10 Rutgers Place, Trenton 8, N.J.

Oct. 4-6 — Northeastern Poultry Producers Council Exposition and Convention; War Memorial Auditorium, Syracuse, N.Y.; sec., Richard I. Ammon, 10 Rutgers Place, Trenton 8, N.J.

Oct. 5-7—Texas Nutrition Conference, Texas A&M College Station; chm., Dr. J. R. Couch, Department of Poultry Science.

Oct. 11-12—Virginia State Poultry Federation; Hotel Roanoke, Roanoke, Va.; sec., Paul Williams, 615 East Franklin Street, Richmond 19.

Oct. 11-12—Virginia State Poultry Federation convention and trade show; Hotel Roanoke, Roanoke, Virginia; sec., J. Paul Williams, 615 East Franklin Street, Richmond 19.

Oct. 12-13 — Association of American Feed Control Officials Annual tural Experiment Station Bldg., University of Kentucky, Lexington.

Oct. 13-14 — West Virginia Feed Dealers Assn.; Blackwater State Park, Thomas, W. Va.; J. Z. Ellison, 801 Willowdale Rd., Morgantown.

Oct. 13-14 — Turkey Short Course and Jr. Market Turkey Show; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Oct. 16-18—Kentucky Poultry Federation and Kentucky Poultry Improvement Assn.; Kentucky Hotel,

CALENDAR FOR 1960-61

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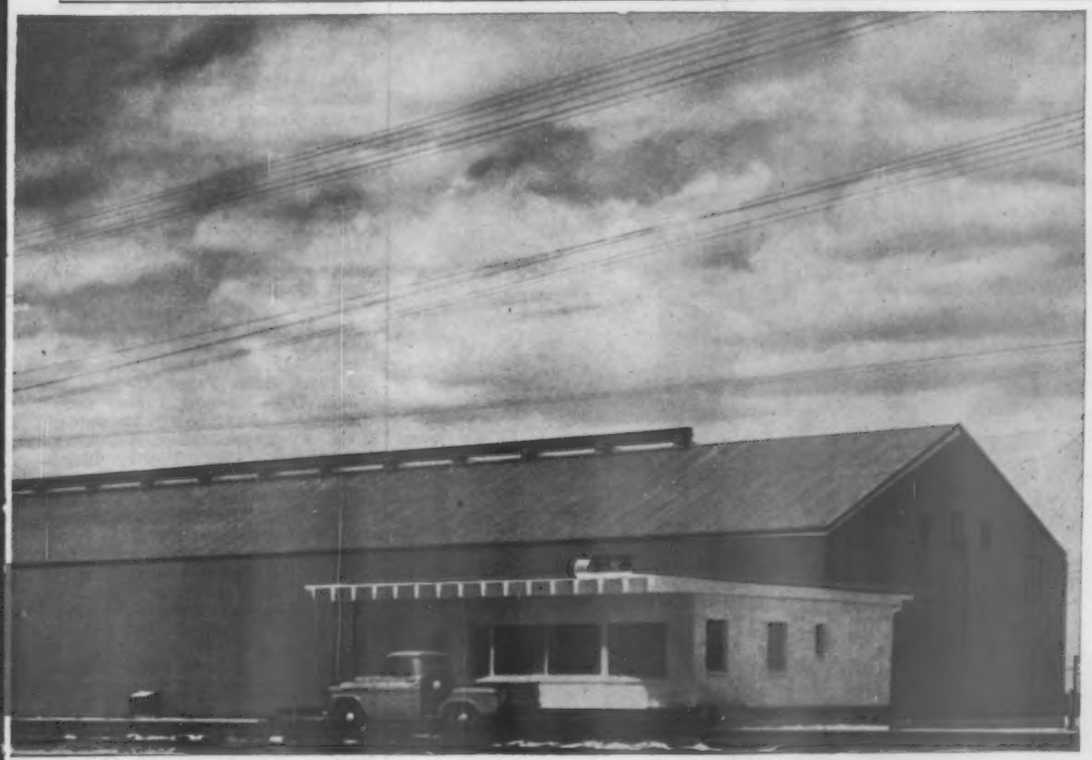

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DURABLE AND ATTRACTIVE! Stran-Steel buildings are available in a choice of nine attractive color coatings. Besides beauty, you get long lasting exterior protection with Stran-Satin colors. Through the years, maintenance costs will be practically eliminated. Baked on at the factory, Stran-Satin colors won't fade, chip or peel.

CLEAR SPAN INTERIOR! The Rigid-Frame Grain-Master "100" provides a world of storage space: A full 100′ wide, 25′ high at the eaves and more than 53′ high at the peak. Lengths in any multiple of 24′.

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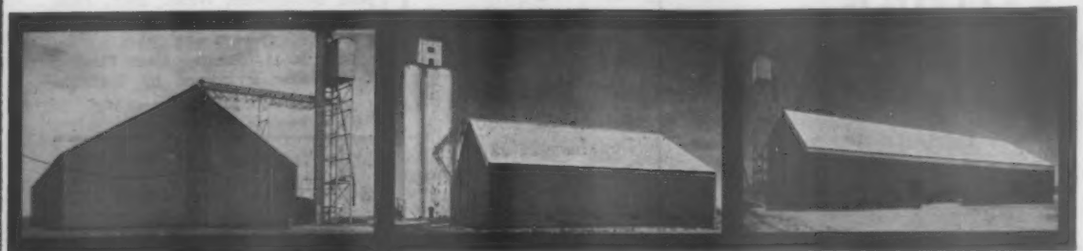

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Louisville; John W. Tuttle, field manager.

Oct. 16-20 — Business Management Program; sponsored by the Southeastern Poultry & Egg Assn., University of Georgia, Athens; sec., Harold E. Ford, 235 East Ponce de Leon Ave., Decatur.

Oct. 17-18—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; co-sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; chm., Bert Maxwell, Nulaid Farmers Assn., Petaluma; association office, 1400 Tenth St., Sacramento 14.

Oct. 20-21—Cooperative G.L.F. Exchange, Inc.; stockholders annual meeting; Onondaga War Memorial Bldg., Syracuse, N.Y.

Oct. 20-21—Poultrymen's Institute; Washington State University, Pullman; W. R. Jenkins, Extension Poultry Specialist, Agricultural Extension Service.

Oct. 23-25—Southeastern Feed Production School; University of Georgia, Athens; Harold E. Ford, Southeastern Poultry & Egg Assn., 235 East Ponce de Leon Ave., Decatur, Ga.

Oct. 25-26 — Indiana State Poultry Assn.; Purdue Memorial Center, Purdue University, Lafayette; sec., Robert L. Hogue, Poultry Science Bldg., Purdue.

Oct. 27-28—National Swine Industry Conference; University of Kentucky, Lexington.

Oct. 27-28 — Washington Poultry and Hatchery Assn.; Chinook Hotel, Yakima.

Oct. 27-29—National Swine Industry Conference; University of Kentucky, Lexington, Ky.; chm., Keith Myers, Secretary, National Swine Growers Council, Box 241, Grundy Center, Iowa.

Oct. 28—Illinois Sheep Day; University of Illinois, Urbana; chm., Dr. U. S. Garrigus, Animal Science Dept.

Nov. 2-3—Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan.

Nov. 2-3—Illinois Feed Assn.-Illinois Poultry & Hatchery Federation, mory, Springfield; sec., IFA, Dean M. Clark, 141 W. Jackson Blvd., Chicago 4; sec., IPHF, Aubrey Harless, Shelbyville, Ill.

Nov. 3—South Dakota Swine Research Day; South Dakota State College, Brookings.

Nov. 3-4 — Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Dr. H. H. Williams, Biochemistry and Nutrition Dept., Savage Hall, Cornell University, Ithaca, N.Y.

Nov. 9-12 — National Renderers Assn.; Statler-Hilton Hotel, Dallas, Texas; sec., Miss Jamie Fox, 30 N. LaSalle St., Chicago, Ill.

Nov. 14-15 — Washington Animal Industry Conference; Skagit Valley College, Mount Vernon, Wash.; John G. Wilson, mgr., Washington State Feed Assn., 814 Second Ave. Bldg., Seattle 4.

Nov. 16-17—Missouri Poultry Improvement Assn.; Hotel Continental, Kansas City; sec., E. M. Funk, Columbia, Missouri.

Nov. 16-18—Florida Nutrition Conference; University of Florida, Gainesville; chm., Dr. J. P. Fearter, Animal Husbandry and Nutrition Dept.

Nov. 25-26 — American Society of Animal Production; Hotel Sherman, Chicago, Ill.; sec., Clair E. Terrill, Animal Husbandry Research Division, Agricultural Research Center, Beltsville, Md.

Dec. 1-2—North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh; chm., Dr. J. W. Kelly, Poultry Science Dept.; co-sponsored by North Carolina Feed Manufacturers Assn., sec., McNair Evans, Box 44, Mocksville.

Dec. 12-13 — Midwest Veterinary Nutrition Conference; Continental Hotel, Kansas City; Lloyd Larson, Midwest Feed Manufacturers Assn., 20 W. 9th St. Bldg., Kansas City 5, Mo.

Dec. 13-15 — Minnesota Poultry Hatchery Assn.; Hotel Radisson, Minneapolis, Minn.; sec., L. L. Baumgartner, Litchfield, Minn

1961

Jan. 4-6—National Turkey Federation; Conrad Hilton Hotel, Chicago, Ill.; sec., M. C. Small, P.O. Box 69, Mt. Morris, Ill.

Jan. 12-13—Michigan Feed & Grain Dealers Assn.; Michigan State University, Kellogg Center; sec., Nevel Pearson, P.O. Box 472, East Lansing.

Jan. 15-17—Indiana Grain and Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 16-17—Northwest Retail Feed Assn.; Hotel Pick-Nicollet, Minneapolis; sec., W. D. Flemming, 112 Grain Exchange Bldg., Minneapolis, Minn.

Jan. 23-25—Farmers Grain Dealers Assn.; Civic Memorial Auditorium, Fargo, N.D.; sec., Lloyd C. Hanson, 513 Black Bldg., Fargo.

Jan. 27 — Missouri Turkey Day; University of Missouri, Columbia; E. M. Funk, sec., Missouri Poultry Improvement Assn., Poultry Bldg., Box 568, Columbia.

Jan. 31-Feb. 1 — Hoosier Turkey Trot; Purdue Memorial Union, Purdue University, Lafayette, Ind.; John N. Howell, Turkey Department, Indiana State Poultry Assn., Poultry Bldg., Purdue University.

Feb. 2-3—Oregon Animal Nutrition Conference; Withycomb Hall, Oregon State College, Corvallis.

Feb. 3-4—Minnesota Turkey Growers Assn., Leamington Hotel, Minneapolis; sec., Roy Munson, 2200 University Ave., St. Paul, Minn.

Feb. 6-7—Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry and Range Management Dept.

Feb. 7-10—American Dehydrators Assn.; Jung Hotel, New Orleans, La.; executive vice president, Joseph Chrisman, 430 Board of Trade Bldg., Kansas City 5, Mo.

Feb. 8-9—Pacific Northwest Feed Mill Production School; Hotel Leopold, Bellingham, Wash.; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 10 — Washington State Feed Assn., annual convention; Hotel Leopold, Bellingham, Wash.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 10-11—Poultry Fact Finding Conference; sponsored by Institute

(Turn to CALENDAR, page 75)

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Warns that Drugs Must Be Used as Approved by FDA

SACRAMENTO — The Bureau of Field Crops, California Department of Agriculture, has warned manufacturers of medicated feeds that drugs which have been approved by the Feed and Drug Administration for use in feeds must be used in accordance with that approval.

"You will be in violation of federal and state laws if you use the drugs in amounts which have not been approved or combined with other drugs in a combination which has not been approved," a bureau announcement said.

"All Feeds"

"This applies to all feeds, proprietary and special mixes. The fact that a customer requests a certain unapproved level of a drug or an unapproved combination of drugs, does not relieve you of your responsibility to manufacture feeds at approved levels only. FDA has the authority to seize illegally medicated feeds and destroy them in addition to prosecuting the guilty manufacturers."

The announcement said that the regulations applying to statements concerning the purpose of the drug, directions for use and warnings must be stated on all labels even though the product may be a special mix.

"If you do not know the levels at which a drug may be used, or for what purpose, and what, if any, warning statements must be on the label, consult your drug supplier," the announcement added. "This information should be on the drum of the drug premix, or in literature supplied by the drug manufacturer.

New Drug Permit

"Certain drugs are classed as 'new drugs' and require a new drug permit from FDA. Drugs mixed with certifiable antibiotics require a Form 10 from FDA. While the state has no authority to enforce the requirements for these permits, the federal government has such authority and you will be subject to prosecution if you fail to obtain the needed permits."

The bureau pointed out that all drugs that move in interstate commerce are subject to FDA regulations. This has been interpreted to include the feeds containing such drugs, even though the feeds are not involved in interstate commerce.

Discovery: Cobalt Aids Alfalfa Nitrogen Fixing

BERKELEY, CAL. — Discovery that the mineral cobalt is a key to the fixing of nitrogen by alfalfa plants has been announced by the University of California division of agricultural sciences.

California scientists have shown that barely measurable traces of cobalt, 24-billionths of a gram in a 4-liter beaker to the highly purified solution in which the alfalfa plants grew, increased by 20 times the amount of nitrogen the plants fixed from the air.

BLAST, FIRE AT MILL

GRAND FORKS, N.D. — Damage was estimated at $125,000 to $135,000 following an explosion and fire at the State Mill & Elevator here. P. R. Fossen, manager of the mill, made the estimate but commented that the final damage figure may be higher.

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

Ag Chemicals Meet Delayed Until 1961

WASHINGTON—Originally scheduled for Nov. 21-22, in Washington, D.C., the proposed Agricultural Research Institute-Agricultural Board Conference on "The Role of Chemicals in Modern Food Production" has been postponed until late summer or early fall of 1961.

The delay was announced recently following an executive committee meeting. The group announced that "it was hoped that by the new date, much of the present feeling in industry and government would have had a chance to subside, thereby providing an ideal environment to take an objective look at the whole problem."

A special committee of the National Academy of Sciences-National Research Council plans to develop a program which will cover pesticides, food additives and other chemicals.

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Dept. 2, 2710 Butler Avenue, Richmond 1, California
1012 Avenue W, Ensley, Birmingham 8, Alabama

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High Grain Feed Creates Odor Problem For Feedlots in the West Coast Area

By JESS BLAIR
Feedstuffs Special Writer

One of the secondary problems of feeding high grain rations to beef cattle has been an increase in objectionable odors. Several feedlot owners in California have noticed that when roughage feeds were replaced by higher energy formulas, the odor became more noticeable.

One feedlot where odors have increased is the Colpien Feed Yards, Inc., near Tulare, Cal. Owner Herman Colpien said he never noticed any odor until he started using a grain ration. His feed now consists of 95% grain. For awhile he fed barley only, but is now using some milo.

"Grain feeding increases odor," he said, "but I never noticed it so much until we started using maize. A few nights ago when the air was damp, I could smell the lots a quarter mile away."

"Smell Like Hog Pen"

One way that some owners have described such lots is that they smell like a hog pen. Feeding more grain produces less manure, but it is wetter and not so fibrous. Unless the weather is extremely dry and the manure dries out rapidly, odors arise.

Fortunately for the Colpien Feed Yards, the country surrounding the place is mostly open farming country, though the area is gradually becoming more thickly settled.

A feedlot which has received complaints from neighbors is the Taylor Ranch at Ventura, where Jerry Griffin and his son, Mike, feed out nearly 20,000 cattle. The feedlots are located on a high hill overlooking the ocean, and at times a sea breeze blows across the lots to a neighboring residential section about a half mile away.

"We first noticed the odor when feeding milo maize," said Jerry Griffin. "After getting a few complaints we contacted some people who have been working on odor control problems and found that a feed additive would reduce the odors to some degree."

Still more important, the Griffins instituted an odor control plan which includes spraying the lots with a chemical that retards bacterial action for two or three days until the manure dries out.

The lots are sprayed at two week to a month intervals or any time after a rain. The manure is also cleaned up more regularly and piled up in large stacks which are packed by tractors.

The Griffins followed this program for a few weeks, then publicized an open house for all residents of the city. They set up loud speakers and had the employees conduct visitors on a tour of the lots.

Thus far complaints have died down, or at least they haven't reached the ears of the owners. Regardless of odors, the company does not intend to change rations. Mr. Griffin says gains are much better and feed costs are reduced. At present the cattle are usually started on an 86% concentrate ration, then finished out with 90%. The grain content consists of barley, milo and corn.

Not So Fortunate

Not so fortunate as these two lots is another one in the Central Valley of California. The owner has several thousand steers within a few blocks of the city and buildings have been erected on all sides of the lots.

He has also attributed some of the odors to high grain feeding, but was receiving complaints even before the change was made. Since the complaints are increasing, he is now contemplating the sale of the land and will move his cattle to a less populated area.

Not only the large feedlots, but dairies and poultry farms are also feeling the antagonism of neighbors and sanitation officials. Many have been forced out of the San Francisco and Los Angeles areas and are moving to the desert and more thinly settled farming areas.

Several of these owners report that odors are not necessarily caused by changes in feeding. Although the dairy owners are using a higher energy feed than a few years ago, they still feed a high percentage of roughage feeds. Poultry owners feed grain rations, but say the main objection of neighbors arises from the fly problem.

Feedlot operators have not fed high grain feeds long enough to detect much difference in flies, although they admit that a more liquid manure could cause an increase.

Pessimistic View

A feed mill owner who manufactures supplements for feedlot owners takes a rather pessimistic view of the future of the beef industry in California. He says that regardless of the feed used, the main problem is people.

"We have 15 million people out here," he said, "and they are increasing steadily. Any time a feedlot owner finds people crowding in on him, no matter what he feeds or how clean he keeps the lots, eventually he will be forced to move."

Feedlot people are not planning any changes in feeding methods, but they are taking a long look at the situation. Where a man is forced to move, he spends a lot of time looking over the new area. He makes sure that it is in a relatively unsettled area and that conditions are such that a town or city won't spring up next door to him.

Program Announced For Vermont Event

BURLINGTON, VT.—Details have been announced for the annual Vermont Feed Dealers and Manufacturers Assn. meeting to be held in Burlington on Sept. 29.

The one-day program includes the following talks by University of Vermont staff members and other agricultural specialists:

"First Aid on the Farm," Dr. J. R. Wadsworth, department of animal pathology; "Feed Additives for Dairy and Poultry Rations," Dr. L. A. Moore, dairy cattle research branch, U.S. Department of Agriculture; "Animal Husbandry Nutrition in South America," Dr. T. W. Dowe, department of animal and dairy husbandry; "Future of Vermont's Poultry Business," D. C. Henderson, department of poultry husbandry, and "Future of Vermont's Dairy Business," Dr. A. M. Smith, department of dairy husbandry.

The association's annual business meeting will follow the talks and a banquet will be held that evening.

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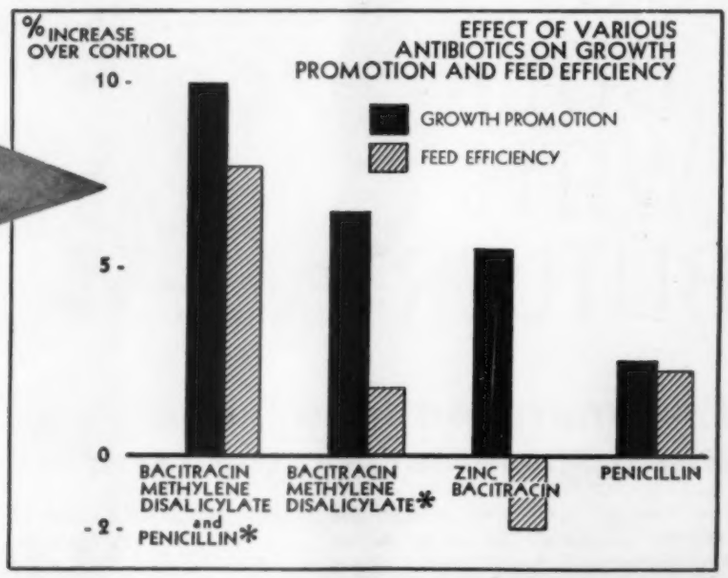

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Feed Men Help Plan $500,000 Turkey Plant

MARSHFIELD, WIS. — Two brothers who operate a turkey farm and feed business near here are heading a group planning a turkey processing plant to cost more than $500,000.

Larry and Ardell Klemme, Stratford, are among the leaders in the newly-formed Wisconsin Turkey Industries, Inc., an organization of nine turkey growers laying plans for the plant. Other leaders are Wallace Jerome, Barron, and Joseph Ziemba, Mosinee. The Klemmes raise around 125,000 turkeys a year.

Larry Klemme said the new corporation has bought 8.6 acres of land on Marshfield's east side, as site for a one-story building, probably of concrete block, containing 20,000 sq. ft. of space. He said the plant would be able to process about 1 million birds a year and should be ready for operation by the fall of 1961. It has a potential employment of more than 100 persons, about 80% of them women.

The plant probably will operate six days a week between September and December, three days a week from January to June, and three to five days a week from June to September. In peak operation, it will use about 8,000 gal. of water a minute. It will have modern processing equipment.

Mr. Klemme said the plant "will fill an increasing need for a turkey processing facility in this area." He noted that turkey production in the area has doubled in the last two years, with an estimated 2 million birds being raised in a 50-75 mile radius of Marshfield. The plant eventually might serve as many as 100 turkey growers, he said.

The plant "will give growers better control of their product," Mr. Klemme said, "and should bring them greater financial returns." Growers have been sending their birds to plants 100 or more miles away, either selling them or having them custom dressed.

Mr. Klemme said the plant will process for non-members of the corporation as well as members. No decision has been made on whether to create a brand name.

The group has been working with Greater Marshfield, Inc., an organization that helps new industries to locate here.

Sells Three Elevators

DENVER, COLO. — The Denver Elevators, a branch of Colorado Milling & Elevator Co., has sold its grain elevators at Sidney and Huntsman, Neb., to the Sidney Farmers Co-op Grain Co. It also has sold its elevator at Gurley, Neb., to the Gurley Farmers Union Co-op Assn.

Dave Page, manager of Denver Elevators, said an 18% cut in grain storage rates set up by the U.S. Commodity Credit Corp. was largely responsible for the sale of the elevators.

Peavey Appoints Research Head

MINNEAPOLIS — Appointment of Robert W. Kemerer to new duties as vice president in charge of research and development and lumber marketing for F. H. Peavey & Co. has been announced by Totton P. Heffelfinger, president of the Minneapolis grain and milling firm.

R. W. Kemerer

Succeeding Mr. Kemerer as general manager of Peavey Lumber Yards will be Arvid L. Orwoll, director of the firm's building service.

"Mr. Kemerer's appointment," Mr. Heffelfinger said, "brings the company's diverse research activities in all divisions into closer touch with one another. He will coordinate and strengthen efforts on these programs, which include new product development as well as production and marketing studies. He will give corporate administrative support at top level in our company for the work of such key researchers in the Peavey system as Dr. Betty Sullivan, director of research for Russell Miller-King Midas Mills."

A Peavey employee since 1932, Mr. Kemerer has moved up through various positions in the company, and was named to head the lumber operations in 1946. He has been a director of the parent organization since 1955.

Appointments became effective Aug. 1.

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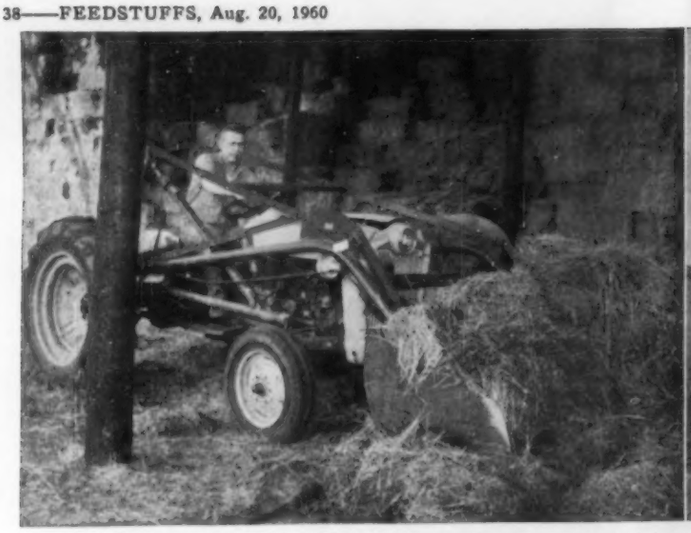

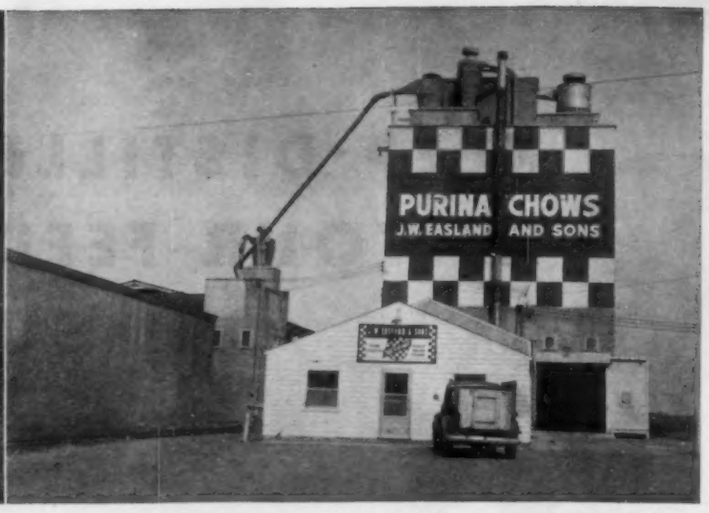

HAY SCOOPER, MILL BUILDINGS—Jim Larsen (first picture), scoops up some hay to take to the hay grinding line of the J. W. Easland & Sons Company. Office and mill and hay storage buildings of the firm are pictured at right. This firm does a large annual volume in pelleted feeds and ships as far as 350 miles in some instances.

South Dakota Feed Company Specializes in Pelleting

By Al P. Nelson
Feedstuffs Special Writer

More than 60% of the feed produced by J. W. Easland & Sons, De Smet, S.D., is pelleted.

A new mill, erected in March, 1959, was especially designed to handle a large and continuous pellet feed production, including extensive use of alfalfa hay.

James C. Easland manages the DeSmet mill. His brother, Leslie, manages another mill at Woonsocket, S.D., and Warren Easland, another brother, operates an alfalfa grinding plant for the firm at Gaylord, Minn.

A revealing factor about the Easland pellet feed operations is the extent of the trade area served. With a large production of cattle and sheep pellets, the firm sells in an area 150 miles north of DeSmet and 350 miles west.

Pellet feed shipments going a considerable distance are shipped via hired semi-trailers carrying 20-24 tons per load. A great deal of this feed consists of sheep pellets, particularly a ⅝ in. size range cube produced with a 100 h.p. California pellet mill and California cooler. The Woonsocket mill makes a ⅝ and ⅞ in. size range cube for cattle and sheep. A Nebraska 50 h.p. boiler produces steam for pelleting at DeSmet and at Woonsocket.

"Many of the larger cattle cubes are used by feeders west of the Missouri River who have large herds," says James Easland. "In many instances such feeders do not have bunks, so pellets are dumped out of a wagon onto the ground and the cattle eat them. In other cases, they are put into feed wagons and storage tanks. Some sheep are fed pellets from ground level, too, in western areas."

Protein Range Cube

The firm makes both a 13 and a 20% protein range cube. Other ingredients going into the range pellets include molasses, alfalfa hay, antibiotics, grain and oil meal.

One cattle owner said his cattle, weighing between 300 to 600 lb. gained 2.12 lb. per day each from Easland pelleted feed.

The firm also pellets a large tonnage of lamb feed, including lamb creep and lamb fattener. One customer using lamb fattener pellets reported gains of 1¼ lb. per day. Another customer with 93 lambs on test registered 0.92 lb. total gain per day for 30 days. Many feeders are putting lambs on the market at 100 to 110 lb. at less than $5 worth of feed per lamb. Most of the lamb pellets sold are the ¼" size. One man west of the Missouri River buys more than 100 tons of pelleted feeds per year.

Cliff McCune, who operates the pellet mill at DeSmet, states he can make 30 tons of pellets in a 10-hour day using alfalfa hay. He reports no trouble using hay in the pelleting process. During fall months pellet production often runs from 10-18 hours per day, he says.

The firm purchases alfalfa hay locally and stores it in bales in a large metal-sided building 60 by 105 ft. More hay is stored in an adjacent pole-type building. Seasonally, the mill may have up to 1,300 tons of alfalfa hay on hand for pelleting operations.

A 125 h.p. Jacobson hay grinder is located in a room in the pole-type building and a front end loader is used to scoop up hay bales from storage piles and bring them to the hay shredding line.

The Easland firm does not have large grain storage capacity at present. When grain is desired it is usually procured at a local elevator, brought to the mill, ground and elevated into two 15-ton capacity ground grain bins.

A 2-ton Howe hopper scale is used for weighing ingredients. The hammermill is a 75 h.p. Jacobson, and the mixer is a 2-ton Howell. Other equipment consists of two Universal legs, a 20-ton Fairbanks scale and a Fischbein sewer for bag feed production. Mr. Easland says that about 75% of the feed produced is sold in bulk.

Concentrate used in the manufacture of pellets is stored in two bins inside the mill. There is also a bin for oats storage and one for barley. There are seven loadout bins, each holding 15 tons. In six of these bins, feeds for sale are stored. The seventh bin is for custom grinding.

Sell Hog Meal

A sizeable volume of hog feed is sold, states the management, but this is mostly in meal. Many of the

SCALE AND SIGN—Cliff McCune (first picture), who operates the pellet mill at DeSmet for J. W. Easland & Sons, fills the 2-ton hopper scale in the first picture. In the second picture, a sign on the salesroom wall advertises the firm's pelleted feeds.

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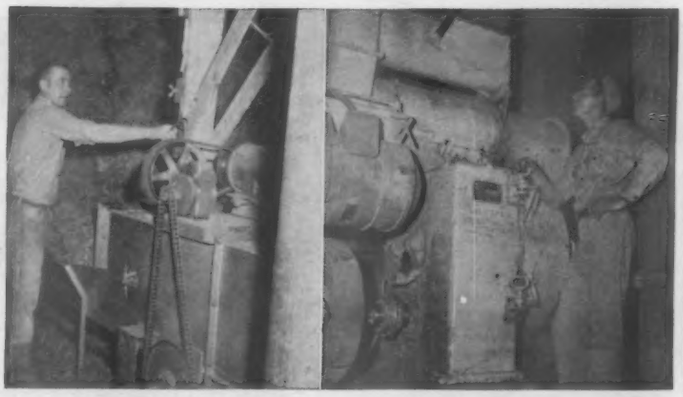

PELLET MILL, HAY UNIT—Jim Larsen (first picture) runs the Jacobson hay unit in the pole-type storage shed. There is also an enclosed metal hay storage shed. Cliff McCune (second picture) operates California pellet mill.

hog feeders have their own grain and thus the Check-R-Mix program for hog feeding is used extensively. Most of the hog feed produced is delivered in bulk to feeders, many of whom have from 100 to 300 hogs. The Easland firm has a 6-ton Pakmaster bulk truck for feed delivery. It is operated by Jim Larsen who handles extra mill duties during spare time.

"After a hog farmer phones in his order, we can have a load of hog feed on its way to him in a half hour," says Mr. McCune. "They like such fast service."

Grinding and mixing charges are 15¢ cwt. The firm also does some custom pelleting. Charges are $4.50 ton with grain in the pellets, and $9 ton with alfalfa in the feed. However, custom pelleting is strictly a service item.

The feed firm stores bagged supplement for free choice feeding in its basement area. When needed it is brought to the first floor by a belt conveyor.

Outside selling for the Easland firm is done by Fred Muilenberg. He states that he often phones sheep, hog and cattle feeders in the evening to check on their feed needs. That's the time when such feeders are at home and have time to talk about their feed needs. Mr. Muilenberg uses the phone when he doesn't have time to cover many feeders who live at considerable distance.

James and Leslie Easland also make extensive sales trips throughout their large trade area. They concentrate especially on large operation cattlemen and sheep feeders. Often they are gone on two and three day selling trips, calling on a number of feeders.

"Quite a few large feeders will place orders for six months or a year's feeding," says Mr. Easland. "This helps the mill management set up a planned production and delivery program on pellets. Many feeders like the convenient handling of pellet feeds in feed bunks and the fact that cattle and hogs eat a lot of feed in this form and thus gain faster. There is also little waste with pellet feeds."

Albers Milling Co. Reports Promotion

LOS ANGELES—Robert Hannahs, southern California sales manager for the Albers Milling Co. feeds division, has been promoted to staff assistant to Albers' executive vice president, G. A. Ensminger. Mr. Hannahs will be transferred to Albers general offices in the Carnation Building, Los Angeles.

Mr. Hannahs graduated from Washington State University, Pullman, with a degree in agricultural economics in 1950. He went directly to the Albers company in Oregon.

From that first job he moved steadily upward through territory sales work, company store manager (Washington), central California sales supervisor; and last year became sales manager of the Albers Los Angeles mill and the southern California area for feed sales. His promotion to the Albers general offices was effective Aug. 1.

To Arkansas Post

FAYETTEVILLE, ARK.—Dr. Grover C. Harris, Jr., poultry physiologist, has joined the staff of the University of Arkansas Agricultural Experiment Station, according to Dr. John W. White, vice president for agriculture.

Dr. Harris, a native of West Virginia, has joined the department of animal industry and veterinary science as assistant professor. He will devote full time to research studies on the physiology of poultry.

He had just been awarded a Ph. D. degree by the University of Maryland and was appointed to the Arkansas position effective Aug. 1.

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BULLETIN F-75 — Reverse Jet Dust Filter Facts. Complete with specifications, typical equipment layouts, capacity and performance tables for DAY type "AC" filter.

BULLETIN H-578 — Gives complete information about Style "A" rotary valves. Construction features, specifications, dimensions and applications.

"SCHLITZ DEFEATS DUST" — FOOD ENGINEERING magazine reprint describes all out dust control for 3½ million bushel Schlitz grain elevator. Request Bulletin "Schlitz Defeats Dust."

"EFFICIENT DUST SNATCHERS" — Bulletin describes DAY's part in providing maximum safety and good housekeeping for starch packing building of large food processor.

BULLETIN 510 — DAY Unit Dust Collectors. Complete, low cost unit designed for plants or applications where central dust control systems are not practical.

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Zinc Supplementation of Chick Diets Containing Raw Soybeans

By the University of Tennessee
Poultry Department

Many experiments have shown uncooked soybeans to be an unsatisfactory feedstuff for growing chicks. However, because of the high quality of soybean protein and the high fat content of the bean, there continues to be much interest in finding ways to overcome the undesirable effects of uncooked soybeans on the growth and feed efficiency of chicks.

Recently, Kratzer et al (1959) suggested that soybean protein forms a complex with zinc making the zinc unavailable. They reported that the addition of 50 ppm. of zinc to a purified diet containing unheated isolated soybean protein was required for maximum growth of poults. Autoclaving the soybean protein improved growth, but the addition of 30 ppm. of zinc to the autoclaved, isolated soybean protein diet was required for the production of maximum growth. This indicated a higher zinc requirement for poults fed diets containing unheated, isolated soybean protein than for poults fed diets containing autoclaved, isolated soybean protein.

While the properties of unheated soybeans would be expected to differ from those of isolated soybean protein, the experiments of Kratzer et al. (1959) suggested that part of the undesirable effects of raw soybeans might be associated with a dietary zinc deficiency. Therefore, an experiment was designed to determine the effect of supplementary zinc in practical chick diets containing uncooked soybeans.

PROCEDURE — Crossbred (Vantress x Thompson White Rock) chicks were sexed and vaccinated for Newcastle disease and infectious bronchitis when they were 1 day old. Five chicks of each sex were randomly assigned to each experimental pen. The chicks were maintained for four weeks in electrically-heated, galvanized, battery brooders having raised wire floors and were provided feed and water ad libitum.

A broiler starter diet containing 25% protein was used as the control diet (Table 1). The soybean basal diet was made by replacing the soybean oil meal, the stabilized yellow grease, and 6 lb. of the corn of the soybean oil meal basal with 35 lb. of raw soybeans which had been ground in a hammermill through a ¼ in. screen. These diets were calculated to be iso-nitrogenous and isocaloric. Both diet formulations included 0.1% DL-methionine. Three additional experimental diets were formulated from the soybean basal diet. Each of these diets contained 60 ppm. of added zinc from zinc oxide and a total of 0.1, 0.2 or 0.4% added DL-methionine. Each diet was fed to four pens of chicks. Diets were assigned to pens according to a 5 by 4 incomplete latin square design (Cochran and Cox, 1957).

Individual chick weights and pen

(Turn to page 44)

EDITOR'S NOTE: *Information presented in this article was obtained from an experiment conducted in a poultry nutrition course taught by Dr. J. K. Bletner, University of Tennessee poultry department.*

"Experimentation with a timely problem and the feeling that they were conducting a real experiment rather than a mere laboratory exercise incited much more interest and more careful work on the part of the students," Dr. Bletner comments. "The training received by the student included everything that would have been obtained in routine laboratory exercises plus the experience of conducting a real experiment."

Statistical analysis of the data and the final draft of the article were prepared by Dr. Bletner. Students who conducted the experiment were C. M. Coomer, J. D. Elliott, T. W. Gray, M. Griffith, F. E. Myers, J. W. Reeves, R. L. Smith and C. E. Webb.

This report of their findings was submitted for publication with the approval of the university's dean of residence instruction.

TABLE 1. Basal Diet Formulation

Ingredients	Soybean oil meal basal	Raw soybean basal
	Percent	
Ground yellow corn	50.1	44.1
Fish meal (menhaden)	5.0	5.0
Alfalfa meal (17% protein, dehydrated)	2.5	2.5
Corn gluten meal	6.0	6.0
Dried whey product	2.0	2.0
Feather meal	2.0	2.0
Soybean oil meal (50% protein)	24.4	...
Ground soybean	...	35.0
Stabilized yellow grease	4.6	...
DL-Methionine	0.1	0.1
Vitamin mix*	0.6	0.6
Mineral mix†	2.7	2.7
Total	100.0	100.0
Calculated analysis‡:		
Crude protein	25.16	25.16
Productive energy (Calories per pound)	1002	1001
Calorie:protein ratio	39.8	39.8

*0.6 pound of vitamin mix contained 189,000 I.U. of vitamin A, 34,000 I.C.U. of vitamin D, 215 mg. of riboflavin, 0.498 mg. of vitamin B_{12}, 18.42 gm. of choline, 1.828 gm. of niacin, 0.318 gm. of pantothenic acid, 3.786 gm. of arsanilic acid, and 0.54 gm. of Aureomycin.

†2.7 pounds of mineral mix were calculated to contain 0.79 lb. of calcium, 0.17 lb. of phosphorus, 1.96 mg. of manganese and 0.48 lb. salt.

‡Where possible, data for these calculations were taken from Hubbell (1959).

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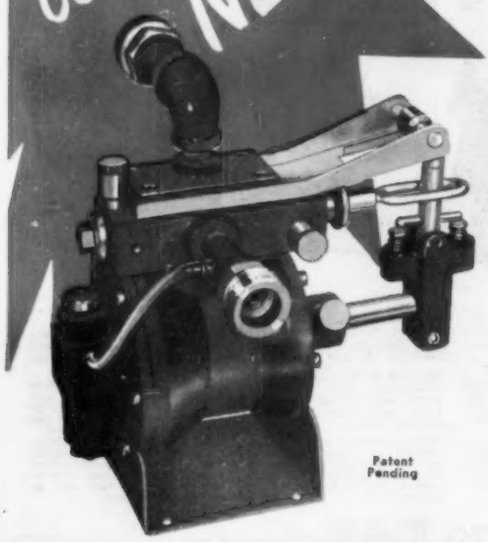

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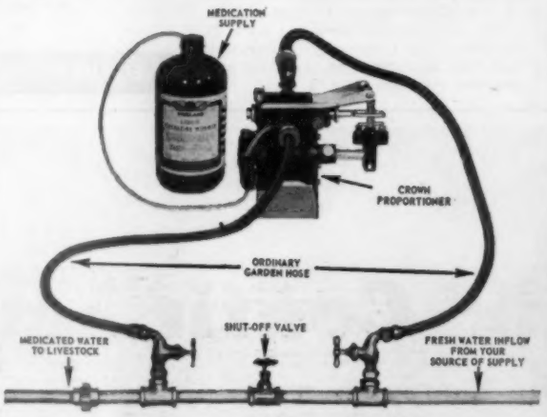
3. Add disinfectant to the water line in sanitizing poultry and dairy quarters and equipment. Sanitizes drinking water.
4. Apply weed killer or liquid fertilizer to lawns, gardens and golf courses.
5. Use it for any job that requires an exact proportion of drugs or chemicals with water direct from the line.

Operates on Water Pressure Alone
Easily Installed in Existing Water Lines



ECONOMICAL TO BUY... ECONOMICAL TO USE!

Vineland Crown Proportioner is a miracle of economy installed on any poultry, livestock or dairy farm. Not only is the initial cost so low that it pays for itself in labor savings in very short order, but maintenance and operation costs are almost non-existent.

Retail Price
Delivered Anywhere in the U.S. $89.50

Vineland Crown Proportioners may be purchased from Vineland dealers and distributors all over the U.S. Write today for the name of the dealer nearest you. If you prefer, order direct from either branch of Vineland Laboratories, Inc.

Installation is simple and so easy that just about anyone can connect the Vineland Crown Proportioner into existing water lines. To switch from one drug to another requires only a simple 3-minute flushing with fresh water. No need to disconnect or dismantle the unit. An illustrated manual, with easy-to-follow instructions for installing and operating are enclosed with each proportioner. Included is a detailed guide showing exactly how to mix and use all types of drugs, vaccines, nutrients, vitamins and disinfectants.

VINELAND LABORATORIES, INC.
VINELAND, NEW JERSEY
WEST COAST BRANCH
4068 Broadway Place, Los Angeles 37, Calif.

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BROWER Whirlwind FEED MIXER

Use BROWER MIXER to blend in a good concentrate with local grains and you're all set to sell your own brand of feeds — step up your profits as much as $1.50 per bag! A BROWER MIXER whirls the ingredients instead of just stirring or tumbling; produces the most thorough mix obtainable . . . a perfect blend in about 10 minutes. Built to give years of trouble-free service. WRITE FOR FREE CATALOG!

BROWER MFG. CO.
625 N. Third St.
Quincy, Illinois

...Magcobar Strong Bonding Bentonites...

GIVING A BIG HAND TO FEED PELLET PRODUCERS

Processed from highest quality bentonite available, Arrowhead® and Southern Star® are a boon to feed-makers concerned with producing better pellets at increased profits. Having the same high bonding characteristics, these feed-makers' special bentonites produce pellets and other such rations that are attractive and firm to resist crumbling in shipment and storage.

Versatile Arrowhead, a western sodium bentonite, gives strongly bonded pellets with a minimum of bentonite; nutritional value is kept high, production cost low. It is available in two grades: high gelling, high swelling, and high gelling, low swelling.

Southern Star, calcium bentonite, has the same strong bonding strength of western bentonite, is low swelling and offers cost savings on delivery to mills in the East and South.

Ample plant storage capacity assures immediate shipment to any place in the nation or to shipside for export. At the same time, dealerships are being established in key areas for even faster delivery.

For information on Arrowhead or Southern Star, or for details on how you can become a Magcobar dealer, complete and mail the coupon below.

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AGRICULTURAL AND INDUSTRIAL PRODUCTS

DRESSER INDUSTRIES, INC.
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Company_____
Address_____
City_____ State_____
Title_____

☐ I would like information about your available dealerships.

HAVE YOU ENTERED ALL THESE MARKETS FOR BEEF FEEDS?

Most of these markets are new and growing fast. With Aureomycin in your formula feeds, you have a major factor in helping you enter new fields and build sales volume.

Exploitation of *more* markets for beef feeds has been undertaken by many feed manufacturers, particularly during the past 10 years.

Notable increases in sales volume have been made in creep feeds for calves, fortified range supplements for wintering cattle, and stress feeds for cattle in commercial feedlots and on farms.

What's ahead in cattle field?

And the future looks bright. Some authorities believe that the beef cattle field offers the big opportunity for the greatest increases in formula feed sales.

Important factors in stepping up sales volume have been Cyanamid's advertising and promotion of formula feed for beef . . . and the successful results in disease control achieved by the wide-spectrum antibiotic AUREOMYCIN* in these feeds.

Cyanamid's current advertising

Shown on the opposite page are two current Cyanamid advertisements. One of them features formula feeds for feedlot cattle, with particular emphasis on stress feeds. The other explains the many different ways in which formula feeds containing AUREOMYCIN pay off in a beef operation. Both these advertisements help you sell formula feeds. These are the kind of advertisements Cyanamid will continue to run this fall and throughout next year. If you plan to expand your cattle feeding markets, get in touch with your Cyanamid representative who will be glad to work with you. American Cyanamid Company, Agricultural Division, New York 20, N. Y.

**AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

ON
FEE
Feedlot operators
Aureomycin to
to keep them gai
get them off fee
First factor in marketing profitable beef is to get feeder cattle on full feed faster by offsetting the stresses of shipping, unloading, sorting, changes in surroundings and in temperature.
How to do it? With stress feeds containing AUREOMYCIN®, fed for the first 30 days. Animals in poor shape and down in weight can be quickly restored to normal condition and feeding, when AUREOMYCIN is given in the feed as soon as cattle go into the feedlot. AUREOMYCIN is the wide-spectrum antibiotic that does the most effective job in preventing the diseases that often follow stresses: respiratory infections, secondary bacterial infections, and subclinical diseases.
Cattle gain every day
Second factor in marketing profitable beef is to keep cattle realizing their full growth potential every day they're on feed. After the initial stress period is over, you can continue cattle all the way to market on feeds that furnish the recommended 70 milligrams of AUREOMYCIN per head per day. AUREOMYCIN helps increase average daily gains up to 16% every day your cattle are on feed. It reduces the incidence of foot rot and liver abscesses.
Market beef sooner
Third factor in marketing profitable beef is to get cattle off feed faster and on to market sooner.
With AURE
cattle use
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reach the d
in shorter t
feed cost. Y
"bloom" buy
See your f
Ask your fe
Shipping, unloadin
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CYANAMID SERVES THE MAN WHO MAKES A BUSIN

CYANAMID
AUREOMYCIN
IN FORMULA FEEDS

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

HOW TO
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MYCIN in the feed,
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WHERE DOES AN ANTIBIOTIC PAY OFF IN A BEEF OPERATION?

If it's the wide-spectrum antibiotic, Aureomycin, the pay-off is everywhere — through the power of this antibiotic in controlling disease

Your prime interest in beef may be a cow and calf herd, or a feedlot operation. Whichever it is, you get generous benefits from feeding AUREOMYCIN®. Experimental trials with thousands of cattle have shown that AUREOMYCIN pays in every phase of a beef operation.

Helping cattle through winter

The *fortified* supplement has come into its own as cattlemen recognized that cows and steers need *protein, vitamin A* and *minerals* — plus an *antibiotic*—to resist infection due to winter stresses and come through strong and vigorous.

When you use wintering supplements fortified with AUREOMYCIN and other health-promoting ingredients, here's what you get: your cows stay healthier, are in good flesh at calving time. They are able to drop sturdy calves and support them to weaning. You increase chances of a bigger calf crop. Your over-wintering calves put on more growth per feed dollar invested. Your replacement heifers reach sound, vigorous maturity earlier.

Making creep feeds pay even more

AUREOMYCIN in creep feeds helps calves develop the stamina to resist disease. It protects calves through stresses such as castration, branding, dehorning and temperature extremes. It brings calves through weaning without a starved-out look. It reduces scouring. It helps you sell better-looking calves and yearlings.

Controlled feeding experiments with AUREOMYCIN in creep feeds have proved these profit extras: Up to 50 pounds more per head in 120 days' feeding; up to 16% saving in feed; up to $11.53 extra return per head.

Saving feed in the feedlot

Feeder cattle provided with rations containing AUREOMYCIN as soon as they go into the feedlot are protected against stress, respiratory infections, foot rot, liver abscesses, subclinical diseases. *And they go on full feed fast.*

AUREOMYCIN helps increase daily gains up to 16% *every day* your cattle are on feed. It pays off in *any* type of ration, including those with a hormone. You save feed because cattle use feed more efficiently. You sell cattle with the "bloom" buyers prefer.

Why Aureomycin is so effective

AUREOMYCIN is a wide-spectrum antibiotic. That means it attacks a wide range of disease organisms, exerts powerful activity in overcoming them. When AUREOMYCIN is in the feed, cattle don't waste feed fighting disease. They use it to put on cheap gains.

See your feed manufacturer

Ask your feed manufacturer or feed dealer for feeds containing the recommended amount of AUREOMYCIN for stress feeding and for continuous feeding. American Cyanamid Company, Agricultural Division, New York 20, N. Y.

®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.

AUREOMYCIN (plus protein, vitamin A and minerals) in range cubes protects against stresses, brings cattle through winter strong and vigorous.

Shipping, unloading, castration, dehorning — AUREOMYCIN in feed gives cattle vigor to withstand these stresses, resist diseases that may follow.

eep feeding has always paid. Now, h AUREOMYCIN protecting health, s gain faster, pay off better.

In feedlot rations, AUREOMYCIN gets cattle on full feed fast, keeps them gaining, gets them to market sooner.

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

CYANAMID
AUREOMYCIN
IN FORMULA FEEDS

TABLE 2. Adjusted* Average Four-Week Body Weights and Feed Efficiencies

Treatment	Body weights† Grams	Feed efficiency† Feed/Gain
1. Soybean oil meal basal ..	479[1]	1.64[1]
2. Soybean basal	344[2]	2.18[2]
3. As 2 with 60 ppm zinc ..	339[2]	2.15[2]
4. As 3 with 0.2% added methionine	348[2]	1.97[2]
5. As 3 with 0.4% added methionine	363[2]	2.00[2]

*Treatment means adjusted for block differences according to the procedure described by Cochran and Cox (1957) for an incomplete latin square experimental design.

†Values with different superscripts differed significantly at the 1% level of probability; those with the same superscript did not differ at the 5% level of probability as calculated by Duncan's Multiple Range Test (Duncan, 1955).

feed consumption data were obtained weekly.

RESULTS AND DISCUSSION — The results of the experiment are summarized in Table 2.

The chicks fed the raw soybean basal diet were much smaller at four weeks of age than were those fed the soybean oil meal basal diet. These dietary effects were evident after the chicks had been on the experimental diets only one week.

Supplementing the soybean basal diet with 60 ppm. of zinc from zinc oxide and this latter diet with additional methionine had no statistically significant effect on the growth or feed efficiency of the chicks. It is entirely possible that the levels of the supplements were too low to produce improvements in growth and feed efficiency under the conditions of this experiment or that sufficient zinc was obtained from the galvanizing on the batteries.

It should be pointed out, however, that the highest level of methionine used was greater than the combined calculated amount of methionine and cystine supplied by the raw soybeans and, thus, would have been expected to have produced some improvement in growth. The data suggest that higher levels of methionine might produce significant improvements in growth.

SUMMARY—The growth and feed efficiency of broiler type chicks were markedly reduced by replacing the soybean oil meal, the stabilized yellow grease and part of the corn with raw ground soybeans. Supplementing the raw soybean diet with 60 ppm. of zinc and the zinc supplemented diet with 0.2 and 0.4% DL-methionine failed to improve chick growth or feed efficiency.

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Kratzer, F. H., J. B. Allred, P. N. Davis, B. J. Marshall and Pran Vohra, 1959. The effect of autoclaving soybean protein and the addition of ethylenediaminetetracetic acid on the biological availability of dietary zinc for turkey poults. J. Nutrition, 68:313-322.

Sterwin Chemicals Inc. Adds to Sales Staff

EVANSTON, ILL.—Melvin R. Ander has been appointed a technical sales representative for Sterwin Chemicals, Inc., and has been assigned to the company's Evanston office, it was announced by William X. Clark, vice president in charge of sales.

M. R. Ander

Mr. Ander, who has had extensive sales experience in the food field in the Midwest, will work under the supervision of J. A. Revord, manager of the Evanston office.

Prior to coming to Sterwin, Mr. Ander was associated with Durkee Famous Foods in new product development work. He was previously associated with Magnus, Mabee and Reynard, Inc., in the Chicago area, and with Pet Milk Sales Corp., also in the Chicago area.

Kentucky Tranquilizer Test Results Reported

LEXINGTON, KY.—Results of experiments with a tranquilizer added to the rations of beef steers being finished at the University of Kentucky Experiment Station have been reported.

Dr. N. W. Bradley and Larkin Summers, the researchers, said the tranquilizer (called Trifluomeprazine or TFM) was given at the rate of 10 mg. daily. Terramycin was given at the rate of 80 mg. per head daily and stilbestrol implant was 36 mg.

"The tranquilizer added to the rations of beef steers being finished did not help the animals tested to get any faster daily gains," Dr. Bradley reports. Dr. Bradley adds that when the tranquilizer was given in combination with Terramycin or given with stilbestrol, or given with both Terramycin and stilbestrol in the same ration, the average daily gain figures did not go up appreciably.

Dr. Bradley says the only material that did help the steers gain faster was stilbestrol—regardless of how it was given, alone or in various combinations with the other two.

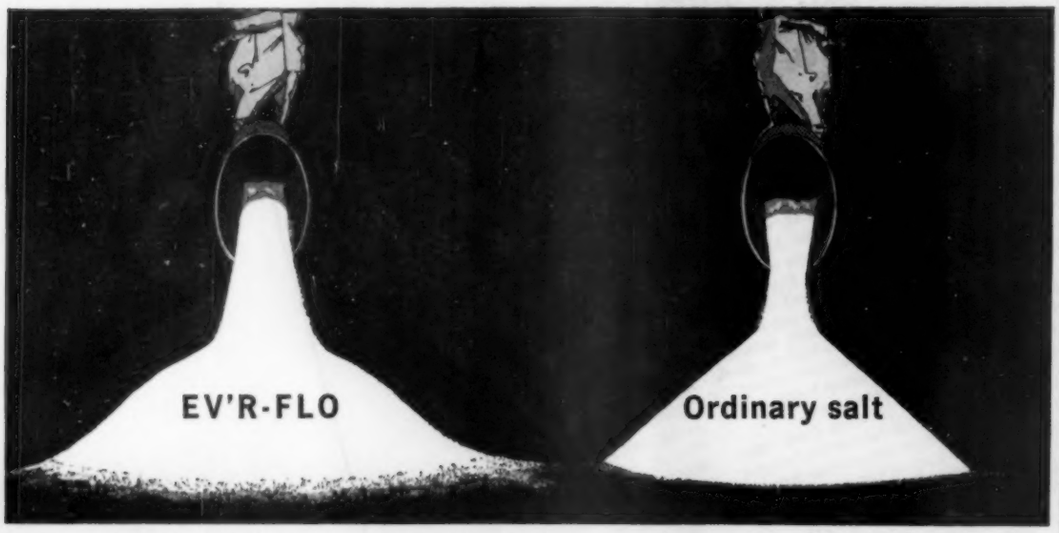
The control steers averaged 2.06 lb. daily gain. The stilbestrol-alone group averaged 2.29 lb.; the TFM alone, 1.95, the Terramycin-alone group, 2.05 lb. In various combinations, only the ones using stilbestrol showed increased gains, from 2.17 to 2.19 lb. daily. The antibiotic and tranquilizer combination daily gain was 1.90 lb. Feed efficiency was about the same ratio, the stilbestrol groups doing the best.

The ration fed the steers averaged 10 lb. of corn silage daily, 11 lb. of ground shelled corn and 2 lb. of soybean meal.

DEFECTIVE EGGS

The total of all defective eggs produced (checks, cracks, blood spots and meat spots) should not exceed 5% of production, says John Skinner, extension poultryman at the University of Nebraska College of Agriculture.

New fastest flowing salt! EV'R-FLO!



THE FASTER IT FLOWS, THE WIDER IT SPREADS. Cone test shows how new Ev'r-Flo Salt spreads very quickly. Ordinary salt at right makes a higher cone because it creates more friction, flows slower.

from Carey research: EV'R-FLO—first mixing salt engineered to cut feed mill costs

Cone Test shows what happens in your plant! When you unload a hopper car, move salt from storage, or meter it into your automatic feed-mixing equipment, Carey Ev'r-Flo flows faster and more freely than ordinary salt.

That's why you get reductions of 10% or more in unloading time! Increased storage capacity, too—125 tons of Ev'r-Flo go in the same space filled by 100 tons of ordinary salt! Flowability and higher density make the difference!

Save salt, too. A special Carey process makes Ev'r-Flo unusually free-flowing and water resistant. Little additive is required, so Ev'r-Flo is actually a saltier salt . . . each ton goes farther.

Ideal for today's automatic feed mill equipment. You push the button and Ev'r-Flo goes. Less dust, less caking, lumps, and bridging in equipment . . . and Carey Ev'r-Flo disperses quickly and uniformly through the other feed ingredients.

ONE 40-TON ORDER WILL CONVINCE YOU!

If this first 40-ton (hopper car) load doesn't flow free and easy, your money will be refunded. Carey Ev'r-Flo Salt is now available in the 22 states where Carey Farm and Industrial Salt is sold. Order today and start saving with Carey Ev'r-Flo.

Have this Carey Ev'r-Flo water test made in your office without obligation. Water poured into beaker does not penetrate Ev'r-Flo crystals. Even after water is poured out, Ev'r-Flo will still flow! See for yourself; phone or write the sales office nearest you (Atlanta, Denver, Fort Worth, Omaha, St. Louis, Kansas City) or The Carey Salt Company, Hutchinson, Kansas.

◀Paul V. Imes, Director of Carey Salt Research

CAREY

THE CAREY SALT COMPANY • Hutchinson, Kansas

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ONE-MAN OPERATION
ONE POWER UNIT
(GAS OR DIESEL)
Write For Details

THE B&L MOBILE

BARNARD & LEAS Manufacturing Company, INC.

CEDAR RAPIDS, IOWA

AHEAD:

New standards of feed performance

Improve your feed and your sales story with Milezyme enzymes

A genuine opportunity to improve feed performance doesn't come along every day. Neither does a natural "peg" upon which to hang a successful feed promotion.

Milezyme enzymes offer you both. College and commercial feeding trials prove Milezyme "steps up" feed palatability. With Milezyme in the ration, livestock and poultry eat more and gain faster . . .efficiently. Milezyme in baby pig starter and prestarter rations boosts feed consumption 7½% to 17% — "on or off the sow." Cattle, lamb, swine, and poultry rations *all* respond to Milezyme.

In addition, it's easy to see the promotion possibilities Milezyme offers. It's new. It's backed by test results. The selling story can be told simply and logically. Best of all, the way animals "take to" your feeds is something most farmers readily notice. And feed consumption is important in their judgment of a feed.

Two Milezyme products are now available. Each is a standardized preparation to insure uniformity Let us recommend the Milezyme that belongs in your feed. "Peg" your promotion on these new, low-cost and accepted concentrated extracts from B. Subtilis microorganism fermentations.

Milezyme T.M.

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Miles Chemical Company
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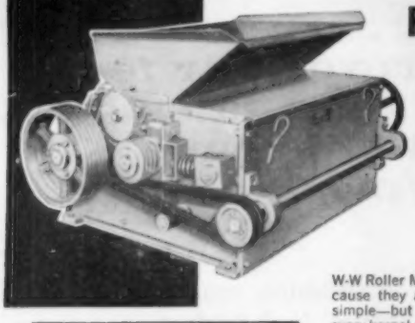
YOU'LL LIKE WHAT YOU BUY IN A W-W ROLLER MILL!



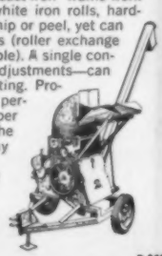
* LIFETIME CONSTRUCTION
* ACCURATE SINGLE-WHEEL CONTROL
* PERFECTLY PROCESSED FEED

W-W Roller Mills are years ahead of others, because they are built to last a lifetime, have simple—but accurate—operation, and process every kernel exactly the way you want it—either crimped, cracked, or crumbled with a minimum of flour. Heavy cast-iron frame-work won't rust out. Chilled white iron rolls, hardened throughout, don't chip or peel, yet can be regrooved many times (roller exchange regrooving service available). A single control wheel handles all adjustments—can be set even when operating. Produces highest capacity of perfectly processed feed per horsepower of any in the field. Adaptable to any power, including PTO! *Write for literature and complete information.*

PRICES AND SIZES TO FIT YOUR NEEDS

Model	Roll Size	H.P.	Price Only*
706-S	10"x 6"	1	$189.50
712-S	10"x12"	3	450.00
718-S	10"x18"	7½	580.00
824-S	10"x24"	10	773.00
830-S	10"x30"	15	1,080.00
836-S	10"x36"	20	1,440.00

*Prices fob Wichita. Attractive time-payment plan available.



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Processors of DRIED FISH SOLUBLE PRODUCTS
A "MUST" IN EVERY SWINE OR POULTRY RATION
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327 S. La Salle St., Chicago 4, Ill. Phone HArrison 7-1528

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Easy-to-use Larvacide automatic sprinkler system—designed for sure killing action in flat storage. FDA has accepted Larvacide as free from requirement for tolerance. Built-in warning odor. Consult us on all grain fumigating problems.

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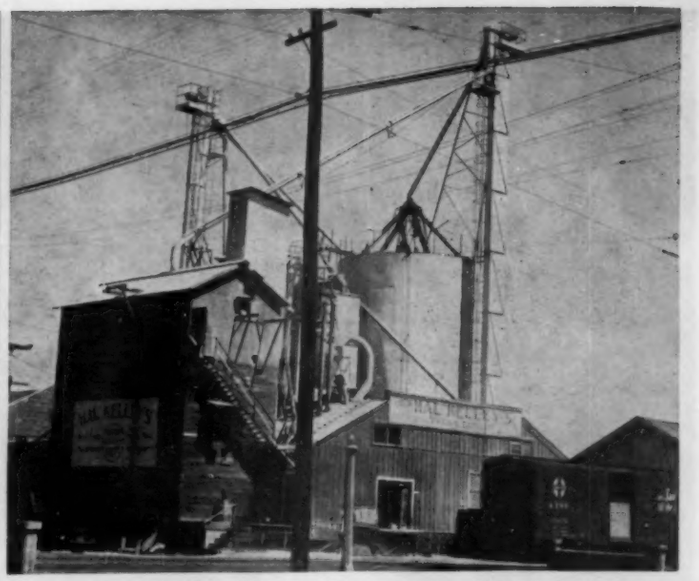


STORAGE TANK—The Hal Kelly Milling Co., Riverside, Cal., uses the large circular tank above its building for storage. The storage unit saves ground space and contains five compartments for holding feed.

Sales Tripled as Firm Changes With Times

By Jess F. Blair
Feedstuffs Special Writer

The Hal Kelly Milling Co. of Riverside, Cal., became successful because it analyzed conditions and changed with the times. And times have changed fast in this suburban area near Los Angeles. A few years ago, poultrymen with small flocks either quit the business or they grew larger. And as the better operators survived the low prices, they learned more about poultry and how to lower feed costs and streamline operations.

Hal Kelly

"This type customer is much different from those we served 15 years ago," said Mr. Kelly. "We must give better service, make a good feed and compete with other mill owners who are fighting for business."

In order to meet this challenge, Mr. Kelly has done a lot of mill renovation. He converted to bulk handling because it now makes up 95% of the tonnage. He put on large delivery trucks, hired two service men and started catering to laying hen owners almost altogether.

"Now about 90% of our feed is for laying hens," he pointed out, "with broilers, turkeys, dairy cattle and rabbits taking the other 10%."

Space Shortage

When he enlarged the mill a year or so ago, he was faced with a space shortage. With the mill located between the railroad and a street, there was very little room for other structures.

Finally he came up with an idea in feed storage, an idea he borrowed from a large concrete company. He had a circular bin made, erected it above the main building, and divided the bin into five compartments. In the middle he made a smaller circular bin, then put partitions in between it and the outside layer of metal.

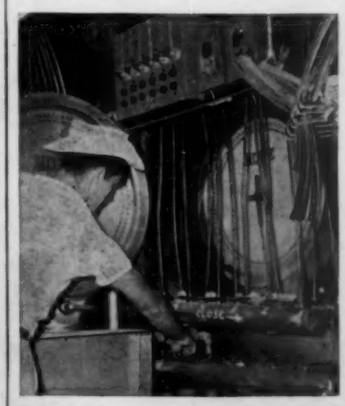
"It reminds some people of an ice cream cone," said Jan Estep, who is assistant to Mr. Kelly. "But it works well and was a means of getting a lot of extra storage without trying to buy more land."

Feed is taken upward by bucket elevator and dumped into these holding bins, from which it is released by gravity flow into a scale hopper. Other ingredients are brought in from other tanks located outside the mill. The circular holding bins hold 60 tons each.

After feed is mixed, it can be run directly into a waiting delivery truck or can be stored in outside loading bins.

Long-Time Employees

"We find that a small mill can successfully compete with larger ones,



MIXER—An employee is shown here operating a premix mixer at the Hal Kelly Milling Co. With this mixer the company can accurately mix the trace minerals and vitamins needed for high production of laying hens. The small mixer is at the right of the scales.

CIRCULAR BINS—This view shows the circular holding bins before the outside was welded on. These bins encompassed in one unit save space and cost, according to the mill owner.

FIGURES—Jan Estep (right), assistant manager, is shown going over some production figures with a bookkeeper.

if it is planned carefully," said Mr. Estep. "In fact, it has several advantages. Our workers here put in a full day. When a delivery man comes in early, he starts sweeping out or maybe doing some repair work. We have three men in the mill and three on delivering and manage to turn out from 2,000 to 2,200 tons of poultry feed per month. Our employees have been here a long time and each one is proficient and interested in his job."

As poultry owners became fewer and larger, the mill changed its delivery system. Whereas formerly Mr. Kelly made a delivery every day, he reduced this to twice a week and finally to twice a month. This is for sacked feed mostly, as the bulk feed for poultry is delivered whenever needed. The serviceman checks the farmer's bins at each visit and makes sure they do not become empty.

At present the company is using five bulk delivery trucks, with each one having a capacity of from 8 to 16 tons. The light ones are used for small hauls and close-in deliveries, while the two 14 and one 16-ton units are for longer hauls.

The company buys all ingredients and mixes a complete feed according to the poultryman's specification. Most owners know exactly what they want, though the milling firm helps formulate rations and keeps customers posted on the latest developments.

Buy Some Premixes

"We do buy a few premixes, but very few," said Mr. Estep. "Some we prepare here in a small mixer. "It is a molasses extract from beets which is mixed with milo, medication and vitamins to make a premix. Of course, all other feeds are also made by the mill."

The firm makes feed according to the customer's formula but has also done quite a lot of testing. Mr. Kelly has worked with producers on testing crumbles but found they do not pay off. The hens eat so much they put on fat which reduces egg production. He has a pellet mill, but it is mostly used for making dairy feed.

In discussing the future of the small mill in this area, Mr. Kelly said: "The trend is toward larger units. Most of the little operators and poor managers are quitting. Our customers range from 3,000-bird flocks up to over 50,000, but the small one won't last much longer.

"Thus far not many operators are manufacturing their own feed, but if units get much larger, this is a possibility. So the mill owner must do two things to stay in business. He must give a complete field service, even helping with vaccination and culling if need be, and he must make a good feed cheaper than the poultry owner can himself. If he fails in either phase, he will find business slipping away."

Steady Growth

By keeping these factors in mind, the Hal Kelly Milling Co. has enjoyed a steady growth and is selling 200% more feed than it did five years ago. Most of this is for cash or on 30-day accounts.

"There has not been much financing of birds and equipment by feed mills in this area," said Mr. Kelly. "We hope to stay out of this, if possible, but no one knows just what will happen in the next 10 years. Most trends are started by a combination of economic balances that may have very little to do with feed manufacturing. Under present conditions, we know how to operate, but no business man can take anything for granted. All of us in this business are sure that the next few years will bring new problems to poultrymen and mill owners alike."

E. F. Drew Ag Unit Sales Office Moved

BOONTON, N.J.—The sales office of the agricultural division of E. F. Drew & Co., Inc., has been moved to the firm's main production facilities here, according to an announcement from the company.

"This change has been made to consolidate our manufacturing, technical service and sales divisions with the aim of providing more efficient operation and service," officials report.

Inquiries pertaining to agricultural sales and services, the officials add, should be addressed to 416 Division Street, Boonton. Telephone number is DEerfield 4-2900.

Stran-Steel Corp. Reports Appointment

DETROIT — Stran-Steel Corp. has announced that John E. Parsons, formerly assistant vice president, Associates Discount Corp., joined that firm Aug. 15 as assistant to the president.

He will handle Stran-Steel's customer and dealer finance programs, according to Charles LeB. Homer, president, Stran-Steel Corp.

Mr. Parsons was instrumental in the development and administration of the Stran-Steel Purchase Plan in his capacity as vice president and general manager of Purchase Plans, Inc., Cleveland, acquired last year by Associates Discount Corp., Mr. Homer said.

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Ray England Wayne Neff

Two Appointed by Jeff D. Brown & Co.

SPRINGDALE, ARK. — Jeff D. Brown & Co., Inc., here has announced two sales appointments. Ray England has been named sales manager and Wayne Neff has been named midwest sales representative, according to Gail Brown, vice president.

Mr. England has been associated with Brown's Ledbrest Breeder Cockerels for seven years and moves to his new position from midwest sales representative.

Taking Mr. England's place as midwest sales representative is Mr. Neff. He will cover all midwestern states including Ohio and Indiana east of the Mississippi River.

Mr. Neff's experience dates back to the 1940's when he was associated in the poultry business with his father. He was also employed by Roy Ritter Quality Feeds and later managed Kever & Shaw Hatchery. For the past year, he has helped develop the Arkansas Poultry Exchange.

Broiler Council to Host Food Editors

RICHMOND, VA. — The National Broiler Council will play host Oct. 5 to newspaper food editors. The editors will be guests at a dinner to be served in the dining room of the Metropolitan Museum of Art in New York City with the theme "Masterpieces in Food."

This theme will be repeated on the special souvenir menu illustrated with art reproductions.

The theme and atmosphere complement one of NBC's industry objectives: To establish chicken as a "glamorous" and nutritious main course meat, NBC stated.

NBC is sponsoring the affair in conjunction with Ac'cent-International. Together they secured the cooperation of museum officials in arranging for an after-hours tour of selected collections in the museum. This will mark the first time the museum has made its facilities available to a food group, NBC reported.

Heads Oregon Event

McMINNVILLE, ORE.—Bob Stoll, H. J. Stoll & Sons, Portland, has been appointed general chairman for the annual fall golf tourney and corn feed sponsored by the Washington County district, Oregon Feed & Seed Dealers Assn., to be held Sept. 20 at Forest Hills Golf Course, Cornelius, Ore.

His appointment was announced by Stan Cellers, Washington County district governor, who also revealed that Steve Inman, Inman & Co., Portland, will serve as chairman of the prize committee.

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Broiler Carcass Yield Predictable Through Statistics

COLLEGE PARK, MD. — Broiler carcass yields can be predicted with surprising accuracy with the use of statistical quality control methods, says Dr. Norman V. Helbacka of the University of Maryland poultry department. His formula was calculated from a study of over a million birds from 108 flocks that were processed in an Eastern Shore plant. Findings of this study were presented by Dr. Helbacka at the American Poultry Science Assn. meeting Aug. 2 at Davis, Cal.

His formula is based on the condemnation rate and the size of the birds. Birds are weighed into a processing plant as a matter of course and the condemnation rate is received from the federal inspector. "When the last bird passes the federal inspector," Dr. Helbacka says, "with the use of the formula we can give the carcass yield of the lot of birds."

As to accuracy, Dr. Helbacka states, that 30% of the time, using the formula, carcass yield can be predicted within .25%. Over 60% of the time carcass yield can be predicted within .5%. Over 75% of the time yield can be predicted within .75%. Ninety percent of the time the yield can be predicted within 1%.

The formula, he explains, automatically compensates for higher grade and larger bird, to some extent, because there is a high correlation between size of bird and yield and grade of bird and yield. Approximately 75% of the variability of yield studied is accounted for by condemnation rate, 15% by bird size and 10% by grade.

Advantages Listed

Dr. Helbacka lists a number of advantages for use of the formula:

1. Eliminates a lot of handling of the birds and labor in that eviscerated carcasses don't have to be weighed out.

2. Reduces human and other errors that are inevitable in weighing and reading scales and in making mathematical computation.

3. If payments were made to growers on basis of yield, it would give an incentive to growers to reduce condemnation rate.

4. Gives more realistic and equitable means of payment.

5. Compensates the good grower and provides for greater differential for payment.

6. Reduces the need for safety margin in bids at auctions. Bidders customarily allow a safety factor in their bids to allow for variability in the condemnation rate.

7. Would strengthen the broiler auction business.

8. Reduces risk to processor.

9. Reduces the number of "no sales" on the auction because of bid-

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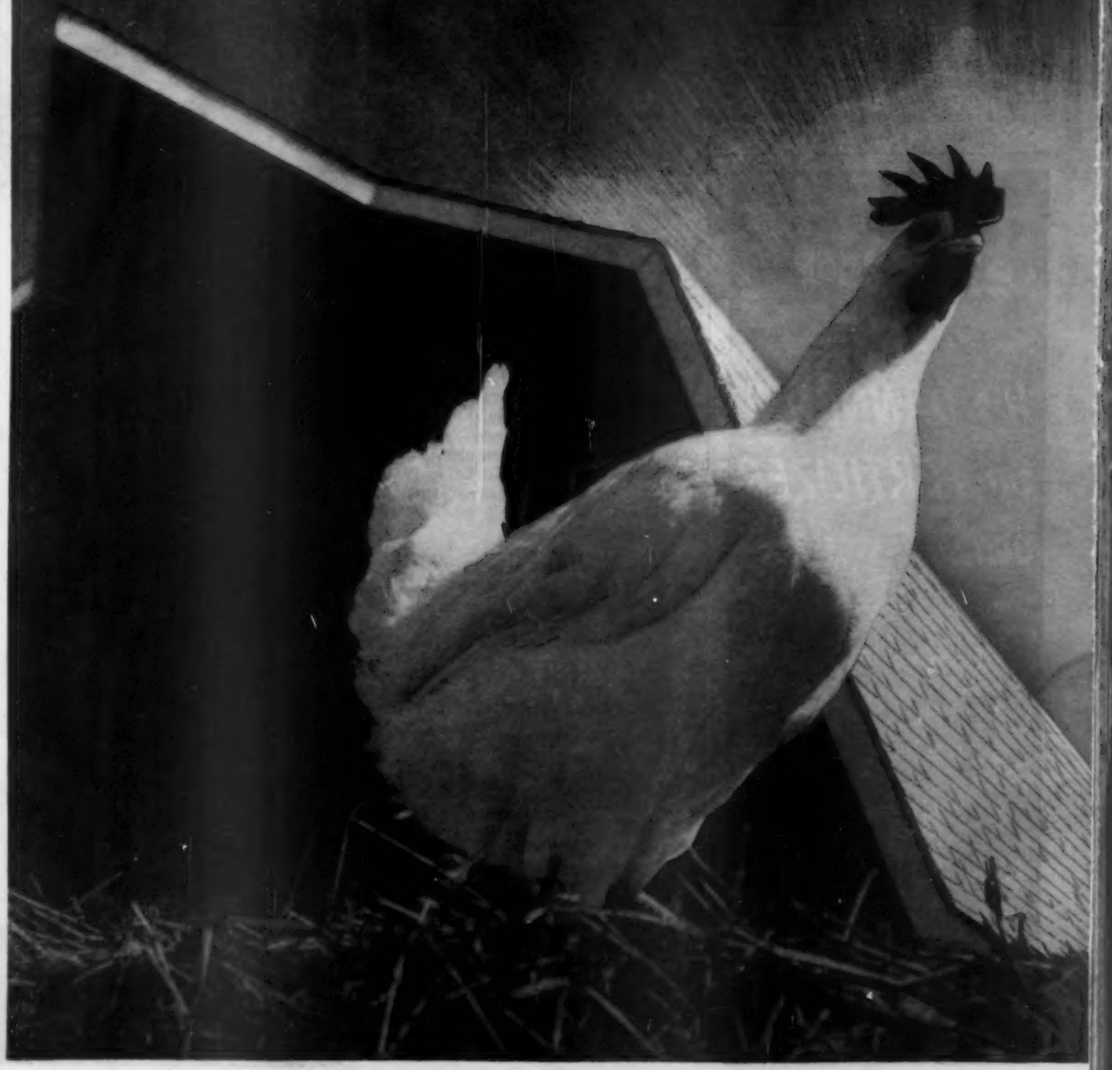

ders being afraid to bid on flocks with high condemnation rate histories.

Disadvantages

Disadvantages of using the formula:

1. If there is a seasonal variation in yield, then the formula may have to be adjusted.
2. There may be some variation in methods of inspection by different federal inspectors. These variations would have to be standardized.
3. Convincing the poultry industry that a mathematical formula is a more equitable means of payment for broilers will be difficult.

Dr. Helbacka's study was done in cooperation with Ernest Matthews, Matthews Poultry, Inc., Laurel, Del.

LAND, BUILDINGS SOLD

MANCHESTER, N.H.—The Wayne Feed Supply Co., Inc., which recently liquidated its stock and went out of business, has sold its land and buildings to an electrical supply company.

Green Soybean Feed Studies Conducted

FARGO, N. D. — Occasionally the growing season in North Dakota is such that the later maturing varieties of soybeans are caught by frost. Then comes the question of whether green, immature soybeans can be used as a pig feed.

Two North Dakota Agricultural College staff members, Dr. W. E. Dinusson and Clayton N. Haugse, have completed a study showing that raw, green, immature, frosted soybeans are not satisfactory for growing-fattening pigs when included as 7% of a pelleted barley ration.

Even mature soybeans have limitations as pig feed since rations containing over 10% soybeans reportedly cause soft, oily carcasses of inferior quality. The second limitation is that raw, uncooked soybeans are inferior in nutritive value to soybean oil meal or well-cooked soybeans for pigs, it was pointed out.

These limitations on the use of "good" beans make the problem of salvage of green immature soybeans for pig feed even greater, the researchers report.

Set Kansas Clinic On Poultry Disease

MANHATTAN, KANSAS — The Kansas Poultry Assn. has set a Disease Clinic and Pullorum Testing School for Sept. 8 at Kansas State University here, according to M. E. Jackson, chairman.

The meeting is intended for hatcherymen, producers and persons from allied industries. Persons needing to qualify as testing and selecting agents must attend the session and the testing program given the following day.

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When it's sweltering hot in the henhouse, Arsanilic Acid boosts egg production... feed efficiency... customer satisfaction

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Announce Florida Swine Field Day

GAINESVILLE, FLA. — Fifth annual Florida Swine Producers Field Day will be held at the University of Florida here Sept. 14, according to Dr. M. O. Watkins, director, Agricultural Extension Service, University of Florida.

Morning program calls for tours of the swine unit where research is underway on: Ground snapped corn vs. corn meal for growing-finishing pigs, a comparison of protein sources for baby pigs, temperature control studies and herd management.

On the afternoon agenda are: Carcass demonstrations in the meats laboratory; the swine outlook for the coming year, Dr. T. J. Cunha, head, animal husbandry and nutrition department, Agricultural Experiment Station; talk on cholera eradication, Dr. W. R. Pritchard, head, veterinary science department; talk on "How I Raise Hogs," Billy Almond, Lee, Fla., and reports on swine research during the year, Dr. G. E. Combs, Jr., Dr. H. D. Wallace and Dr. J. W. Carpenter, members of the staff of the animal husbandry and nutrition department.

Plan Conference On Beef Grading

SANTA MARIA, CAL.—An industry-wide conference on beef grading has been announced by Dean Brown, Santa Maria, Cal., chairman, American National Cattlemen's Assn. beef grading study committee.

Sponsored by American National, the conference is to be held in Kansas City, Mo., probably in mid-November. The U.S. Department of Agriculture also has been asked to cooperate.

"Beef grading is one of the most widely discussed subjects in beef cattle producing, feeding, processing and retailing circles today," Mr. Brown said. "The purpose of the industry-wide conference will be to consider current proposals and other means of improving beef grading throughout the nation."

Feed Mill Opens

HERMISTON, ORE. — The new Berg Brothers feed mill here is now in full production.

The plant will produce complete ration feeds and do custom processing of farmers' grain for customers in eastern Oregon. The building measures 40 by 100 ft. and the elevator is 94 ft. high. The plant is situated on a 19-acre site.

Berg Brothers has been operating in Hermiston for 15 years. Al Berg is president of the firm.

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Trends in Silage Preservation Topic At Michigan Meeting

By Special Correspondent

EAST LANSING, MICH.— The effect of enzymes, antibiotics and molasses in silage preservation was discussed at a recent farm research conference at Michigan State University.

More than 300 researchers and farm organization representatives from across the nation traveled to Michigan State's Kellogg Center for Continuing Education for this 12th annual conference of the American Farm Research Assn.

Research papers were presented on specific topics in the areas of fertilizer, feed, petroleum, seed and farm chemicals.

A highlight of the session on feeds was a talk by Dr. Carl F. Huffman, Michigan State department of dairy husbandry, on "The Newest in Silage Preservation."

Dr. Huffman said that about 90% of the silage produced in the U.S. is made from corn and sorghum crops which do not need an additive.

Corn and sorghum crops, he said, are high in fermentable carbohydrates and low in nitrogen. The trend toward greater use of these two crops for silage will very likely continue, he predicted, due to (1) the ease of change because of the application of hybrids in plant breeding, (2) increased yields by fertilization and (3) increased yields as a result of improved cultural methods.

Hay crops cut at the recommended stage of maturity need pretreatment or additives, Dr. Huffman maintained. Early attempts to preserve hay crop silage usually failed because of the high moisture content which encourages abnormal fermentation and the development of bad smelling silages, he added.

The speaker pointed out that no single criterion is satisfactory for judging silage quality. Several criteria have been used, he said, including pH, ammoniacal nitrogen, lactic acid, butyric acid and anaerobic spore count.

Moisture Content

Dr. Huffman discussed wilting for pretreatment of the crop and declared that millet silage made at Michigan State in 1897 contained 42.9% dry matter and was readily eaten by livestock. Further experiments revealed that silage made from hay crops was improved by reducing the moisture content of the crop before it was ensiled.

Other research indicated that it is apparent that the exclusion of air is the only condition required to prevent silage spoilage, although the higher the moisture content the more extensive the fermentation and the greater the likelihood that objectionable odors will develop. This research pointed the way, he added, for the development of the Harvestore and the production of haylage (a hay crop wilted to 50% moisture or less and stored in gas-tight silos).

Dr. Huffman reported on research done in South Dakota which compared alfalfa with alfalfa haylage for milk production using 10 cows per group. The alfalfa was cut in the bud stage. Half of the field was field dried to 40% moisture, chopped as finely as possible and blown into an air-tight silo. The other half was flail-chopped to as long a length as possible and finished drying on an outside cold air fan drier. In 1958, heifers fed haylage and no grain gained 1.92 lb. daily; with 4 lb. grain daily, they gained 2.43 lb. In 1959, they gained 2.23 lb. on haylage without grain, and 1.96 lb. with 4 lb. of grain daily.

In discussing acid preservatives, Dr. Huffman first considered A.I.V., a silage additive developed by a Finnish researcher consisting of a mixture of hydrochloric and sulphuric acids applied on the green material at the time of ensiling. A sufficient amount of this mixture is applied to decrease the pH below 4 and is an effective method of preserving the crop, he declared. But, he added, it has several disadvantages: (1) Difficult to handle, (2) costly and (3) cows may develop acidosis unless a base is fed.

Phosphoric acid has been used on the basis of a theory that it could be used for the animal and the excreted phosphorus could be used as fertilizer. Although phosphoric acid has the same disadvantages as A.I.V., he said, research shows that phosphoric acid grass silage is a satisfactory feed for dairy cows when it is supplemented with hay containing an appreciable amount of legume or with limestone.

Hydrochloric acid, he added, is in the same class with A.I.V. silage.

Formic acid as a silage preservative is marketed in Germany in carboys containing 90% formic acid and is diluted before using to produce a 60% solution, he said.

Discusses Kylage

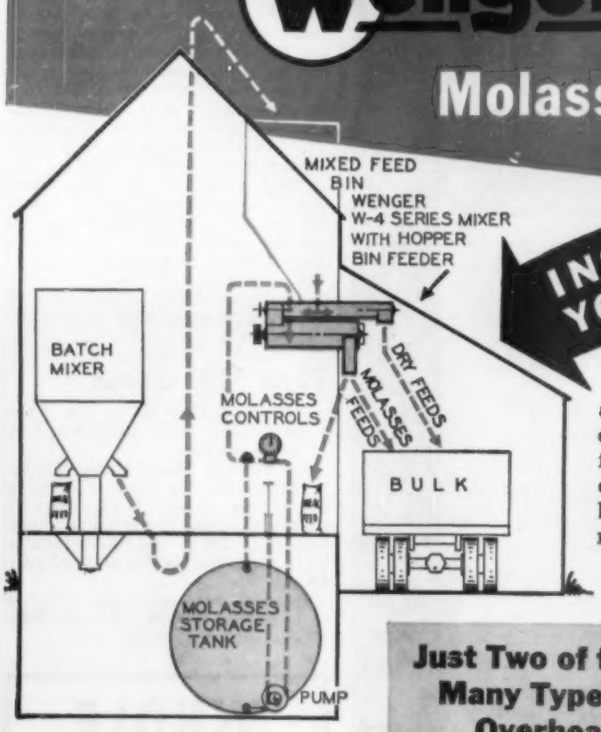
Dr. Huffman described the advantages and disadvantages of kylage, a mixture of sodium nitrate and calcium formate; sulfur dioxide, and sodium meta-bisulfite. He also told the group that molasses was among the first preservatives used for forage crops, and its addition produced excellent alfalfa silage, although it does not prevent seepage losses when used on high moisture forage crops.

Enzymes, such as Silo-zyme and Zymase, have also given some good results, the speaker said. And starch in the form of cereal grains has been added to silage usually with good results when 2-3% were used. Good results were also obtained by using 3-4% barley meal or oat meal in Swedish experiments.

Carbohydrate research has shown

MOLASSES MEAL FEEDS IN BULK

WITH Wenger W-4 SERIES Molasses Feed Mixer



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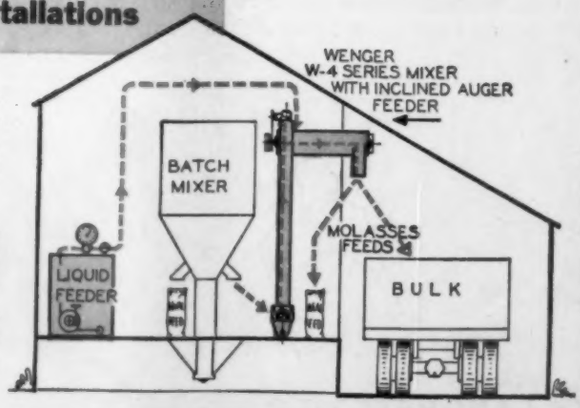

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Chas. Vantress Farms are now dedicated to the specialized business of Male Line Breeding ONLY.

Chas. Vantress Farms are non-competitive with customers and are a protection to all customers by assuring them of equality in male line breeding stock with all other Vantress Customers. **Chas. Vantress Farms does not engage in any other phase of the meat chicken business.**

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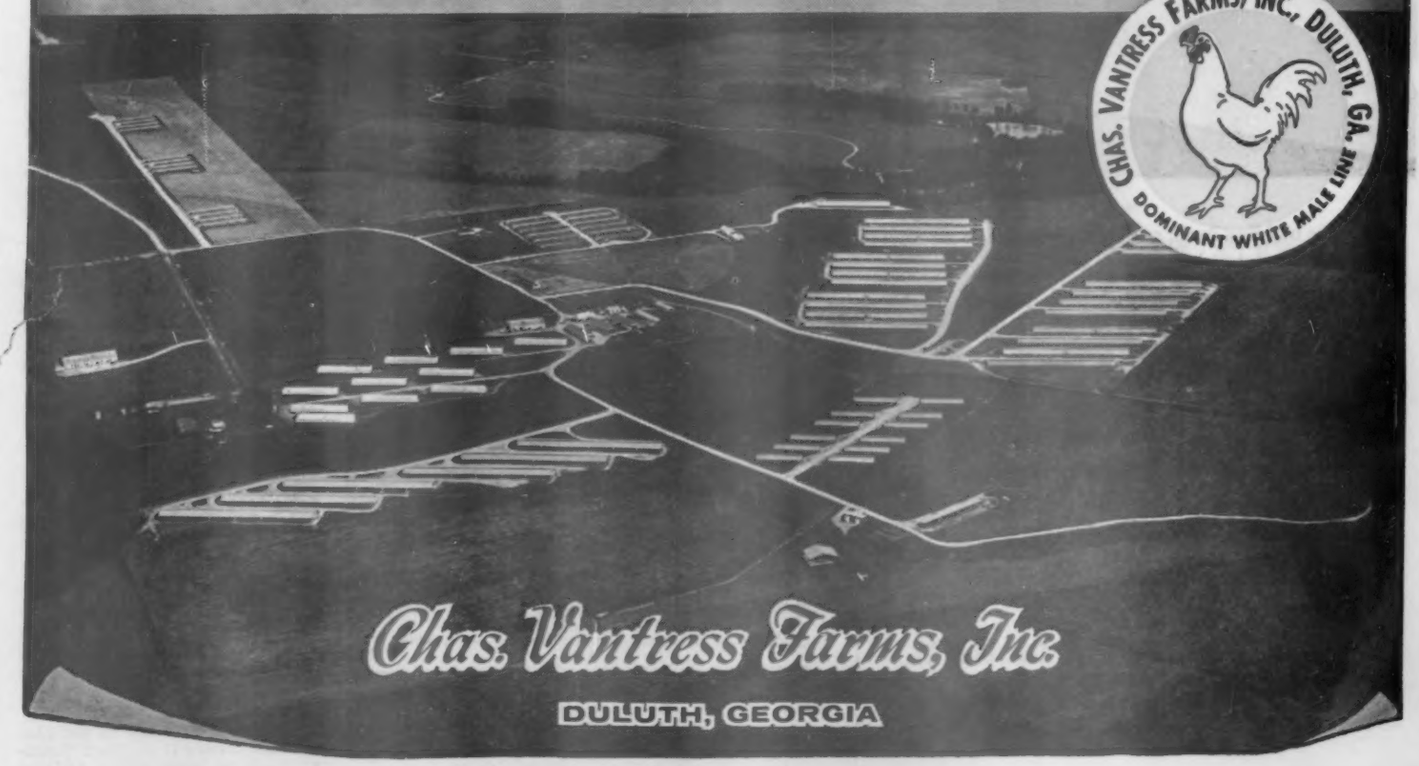

Chas. Vantress Farms, Inc.

DULUTH, GEORGIA

CITIZENS COMPLAIN; FEEDLOT DEODORIZED

LUBBOCK, TEXAS—A large number of residents in southeast Lubbock are complaining because of odors they say are coming from the Lewter Feedlots. A citizens' committee, headed by Marvin McLarty, has 11,000 signatures protesting the odors.

Mr. McLarty said he did not think the Lewter lots were the sole source of the odor, but did produce most of it. His group stated that if it found the city dump and sewage disposal plant contributing factors, then these would also be under attack.

Durward W. Lewter, owner of the feedlots, said he was just as much concerned with the odors as anyone else. He is now trying a new deodorant which the manufacturer guarantees will stifle the smells emanating from the decaying manure.

It is placed in gallon containers with wicks in them, and these containers are located on all the outside and partition fences at 16-ft. intervals.

Before using this deodorant, the management used another kind which was sprayed onto the lots. However, it gave off a sweetish smell that mingled with the manure odors and was offensive.

that where sugars were completely utilized, starch and cellulose were, at best, only partly utilized in the fermentation, he said. But good results were obtained with mixtures of barley meal and malt in which the amylase present broke down the starch into sugar which then became available for fermentation, he added.

Dr. Huffman reviewed research done on antibiotics in silage making, which included streptomycin, Aureomycin, penicillin, neomycin, bacitracin, Terramycin and a mixture of all these. Silages with penicillin and neomycin had a bad odor, he said, and those with Aureomycin, bacitracin and streptomycin were generally excellent in odor.

In discussing some of the difficulties encountered by farmers in making alfalfa silage with antibiotics, Dr. Huffman pointed out that, in many cases, silage turns out better than anticipated and other times much worse. Sometimes fermentation is very rapid, he said, and considerable acidity is developed in a few days and desirable silage results. But, he added, sometimes fermentation is slow and the silage never does reach a pH low enough to assure adequate preservation. Further information is needed before any recommendations can be made in regard to the use of antibiotics for silage preservations, he said. Zinc bacitracin, he said, is also being tested as a silage preservative, but more data is needed.

Grain Bank Interest Developing in Texas

FT. WORTH—There is interest developing among Texas feedmen on the "grain bank" plan, it was reported by a Texas Grain & Feed Assn. news bulletin. The association reports a number of inquiries on the plan in recent weeks.

The bulletin describes the grain bank as a "program by which a farmer will store his grain with a nearby feed dealer until it is needed for feeding; he then withdraws it, ground into feed by mixing with a commercial supplement according to research formulas."

Among the advantages claimed by the grain bank, according to the publication, is that it tends to hold customers. "As long as the dealer has the customer's grain and is giving good service, there is not much danger of losing the customer," the bulletin said. "It assures a more stable feed business and tends to overcome competition from portable mills. It tends to prevent installation of feed mixing machinery on larger farms. It saves the feeder's time and cost of frequent hauling and farmers find that this service reduces their on-farm chores of scooping and hauling grain. In areas where bulk delivery is available, they can feed their livestock and poultry literally 'by telephone'."

Among the problems pointed out is setting up a policy which is the same for all customers and the specialized bookkeeping. A grain drier is essential for the program in some areas as the dealer guarantees to return grain of equal quality and grade. There is additional capital requirement. Limited storage space can be a problem. In some areas it is necessary to restrict volume of deliveries.

Pointed out was the fact that in the central states where "grain banking" has become almost standard, only 22% of the dealers make a direct charge for the storage.

Credit is usually given to the farmer in terms of pounds of grain, with adjustments for moisture and shrinkage.

The "grain bank" has expanded in the commercial corn area but now some dealers in the grain sorghums belt are trying it with milo as a base.

Dog Food Makers To Observe Week

CHICAGO—A number of dog food manufacturers plan to point up National Dog Week, Sept. 18-24, in their fall advertising schedules, according to National Dog Week headquarters here.

A four-color poster on the theme "Deserve to Be Your Dog's Best Friend" will be distributed to all segments of the industry upon request, it was announced.

Increased local participation is expected in National Dog Week this year. Seventy-one local chairmen in 28 states have been appointed to plan observances and 459 Girl Scout leaders in 47 states have requested National Dog Week youth kits.

Yeiser Chicks Adds To Management Staff

WINCHESTER, KY. — Appointment of Theodore S. Scarbrough to the business management staff of the Yeiser Chicks, Inc., has been announced by Beverly Yeiser, president.

Mr. Scarbrough, a specialist in credit and contract sales, is well known to the poultry industry in the south. For the past nine months, he has assisted the creditors of the Gainesville Hatchery, Inc.

Mr. Scarbrough received his education at Slippery Rock State Teachers College in Pennsylvania and the University of Tennessee.

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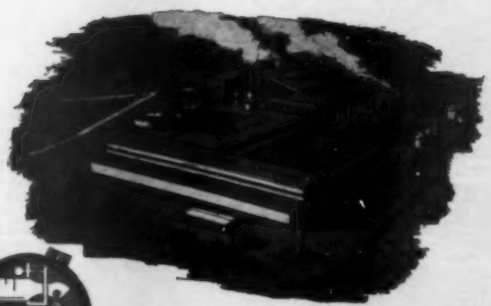

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GALLIMYCIN...established antibiotic for high-level medication of respiratory disease conditions in poultry...now cleared for continuous low-level feeding as a growth stimulant in broiler rations and breeder feeds!

...TESTED . . . compared in extensive scientific studies at more than a dozen agricultural colleges and experiment stations!

...PROVEN in every major broiler area in the country in commercial trials involving over 40 million birds!

...EFFECTIVE as a low-level, full-life, growth stimulant . . . from first day of life until the bird is marketed!

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...NO WITHDRAWAL PERIOD . . . can be fed continuously from one day of age to marketing!

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190 lbs. extra weight per 1,000 birds on 51.4 lbs. less feed per 1,000 birds

Using a broiler market price of 18¢ and a feed cost of 4¢ per lb., (plus the extra cost of the antibiotic) . . . GALLIMYCIN produced . . .

$35.45 extra profit per 1,000 birds

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It takes less than 1% improvement in growth to more than pay for GALLIMYCIN at the 5-gram level recommended for optimum economic returns!

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TECHNICAL INFORMATION . . . for more complete information and full details on all clinical and experimental results, Abbott has a new 12-page bulletin on "GALLIMYCIN-10 for Chick Growth". Write for Abbott Technical Bulletin No. 560.

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CHEMICAL MARKETING DIVISION

NORTH CHICAGO • MONTREAL

Oil-Treated Eggs Keep Fresh Look

ST. PAUL — Eggs treated on the farm with processing oil are more apt to still have that fresh look when the housewife breaks them in the skillet.

G. W. Froning, M. H. Swanson and J. H. Skala, University of Minnesota poultry researchers, made that claim at the annual meeting of the American Poultry Science Assn. at Davis, Cal. They said the finding gives one more good reason why it pays egg producers to use the oil.

Earlier Minnesota studies had shown that on-the-farm spraying with oil kept eggs at grade A level much longer than untreated eggs. The more recent findings show that spraying helps retain fresh appearance, too.

Both results can mean more acceptable eggs to consumers and more profits for producers, the researchers say.

In the current studies, researchers sprayed eggs with oil six hours after laying and left others untreated as a check. Some eggs in each group were stored for 14 days at room temperature and the rest were held 30 days at 55°.

In each case, oiled eggs after storage had whites that stood up better than untreated ones. Treated eggs didn't spread out as much in the fry pan and showed less change in protein composition from when they were fresh.

Processing oil protects egg quality through keeping the natural carbon dioxide in eggs for a longer time. Normally, carbon dioxide gradually escapes through the shell and loss of this gas causes quality to drop. The oil leaves a film that prevents carbon dioxide from escaping.

General recommendation for producers is to use 3 to 4 gm. of oil on every "filler flat" of eggs in the packing case, within a day after gathering. With a hand sprayer, this means about a gallon of oil for 95 cases of eggs containing 30 doz. each. The oil also comes in aerosol pressure bombs.

Buys Hatchery

CAMBRIDGE, ILL.—Robert Naslund, feed dealer here, has purchased the Cambridge Hatchery from Hutchinson & Carter and will take possession Sept. 1. He will operate his feed business from the hatchery building.

Tennessee Names Dairy Dept. Head

KNOXVILLE—Dr. James T. Miles has been appointed head of the dairy department of the University of Tennessee effective Sept. 1, according to Dr. Webster Pendergrass, dean of agriculture. Dr. Miles will succeed C. E. Wylie, who is retiring Aug. 31 after 36 years as head of the dairy department.

The new department head is originally from Erin, Tenn. He received his bachelor of science degree from the University of Tennessee in 1940, majoring in dairying. He received his master's degree here in 1948. In 1951, he received his doctor of philosophy degree at the University of Wisconsin. Major studies have been in dairy and minor studies in agronomy and bio-chemistry.

Dr. Miles is now head of the dairy department at Mississippi State University.

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Last year Brenneman increased grain business 86% with poor crop conditions prevailing. His trading area has been considerably expanded. With the added storage facilities he can now bank corn after the peak of the wheat harvest. Summing up, Mr. Brenneman states, "We think Fitzpatrick did a fine job for us. Our investment is paying substantial dividends!"

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Compile Materials On Detecting of Salmonellae in Eggs

CHICAGO — A compilation of microbiological procedures, used in the U.S. and in other countries, for the detection of salmonellae in egg products, has been made available by the Institute of American Poultry Industries, according to Margaret Lally, IAPI laboratory director.

It is hoped, Miss Lally said, that the compilation of methods and comments will prove a stimulus for the comparison of procedures and that such work will eventually provide a universally acceptable method for the reliable detection of salmonellae in egg products.

In an effort to improve and standardize the methodology, the industry through the Research Council of the Institute of American Poultry Industries, has participated in numerous meetings, workshops and collaborative studies to evaluate the problem.

Problems Discussed

In 1951, the institute sponsored a meeting of the industry, Food and Drug Administration, Quartermaster Corps, U.S. Department of Agriculture and Dr. Gail Dack of the Food Research Institute to discuss the problems and some suggested solutions.

Following this meeting, work was continued by industry to improve processing procedures in order to reduce the occurrence of salmonellae in egg products. In February, 1953, a committee of the IAPI Research Council was set up to write a procedure for a cooperative study of the incidence of salmonellae in egg products. Egg products processors participated in this project and to check techniques, of the various laboratories, identical samples were sent to the participants starting March, 1953. Four check samples were distributed with meetings of the committee and participants following each trial.

In November, 1954, a salmonella workshop was held at Iowa State University under the direction of Dr. John Ayres to demonstrate and review bacteriological techniques in the methodology for salmonellae. As a result of this workshop, refinements in the procedure were recommended and this method as modified has been used consistently by the industry since that time.

Difficulties have been encountered in the isolation of salmonellae from products containing small numbers of organisms. Various techniques were tried in order to overcome this problem. A second workshop to compare improvements in techniques and media was held in January, 1959, at Iowa State University. Pre-enrichment using lactose broth, centrifugation, enrichment using selenit-brilliant green sulfa-pyridine and the IAPI procedure as previously modified were reviewed and demonstrated.

At this workshop, the need for a compilation of the methods presently in use both here and abroad, and the need for a more reliable, simple economical procedure was evident, the institute said.

Division Members

Members of the microbiology division of the institute's Research Council are: Dr. John L. Stokes, Washington State University, chairman; Dr. John C. Ayres, Iowa State University; Dr. Louis A. Harriman, Armour & Co.; Dr. John H. Silliker, Swift & Co., and Ellen Tuttle, Wilson & Co.

The institute gave special recognition to Dr. W. I. Taylor, Children's Memorial Hospital, who at the request of the council, assembled the collection of methods and the commentary.

Copies of the 46-page publication are available at $5 each from the Institute of American Poultry Industries, 67 E. Madison St., Chicago 2, Ill.

TEST HIGH-MOISTURE BARLEY FOR CATTLE

FARGO, N.D.—North Dakota feeders, now that they have tested the success of using high-barley rations for fast beef cattle gains, are going a step farther—their state experiment station here has already begun testing the possibilities of high-moisture rolled barley.

As an agricultural engineer at the North Dakota Agricultural College's first annual ag engineering field day described the new step, "We figure that if high-moisture corn is worth 12% more in feed value than dry corn in Iowa, and high-moisture grain sorghum in Texas tests has shown 18% greater feed value for cattle, why wouldn't high-moisture barley perform in a similar way?

"Water-soaked barley has shown up very well for poultry on the West Coast. We're simply harvesting barley earlier, with the moisture already in it."

Researcher Joins Cargill-Nutrena

MINNEAPOLIS — Dr. Norman D. Magruder, researcher in animal nutrition, has joined Cargill-Nutrena to head research aimed at improved feeding, housing and management of laying hens, pullets and replacement chicks.

Dr. N. D. Magruder

Dr. A. Richard Baldwin, research director for the agricultural products firm, said Dr. Magruder began work in late July at the 840-acre Cargill-Nutrena research farm near Elk River, Minn. His activities are in cooperation with M. F. Lawatsch, in charge of broiler and turkey research, and under direction of Dr. Cloy B. Knodt, research farm director.

Before joining Cargill-Nutrena, Dr. Magruder was on the staff of the department of nutrition at Pennsylvania State University four years and with Chas. Pfizer & Co., Inc., in Terre Haute, Ind., three years.

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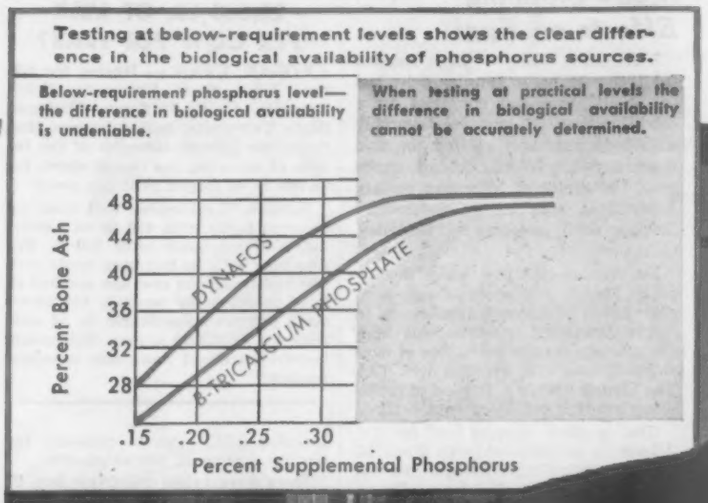

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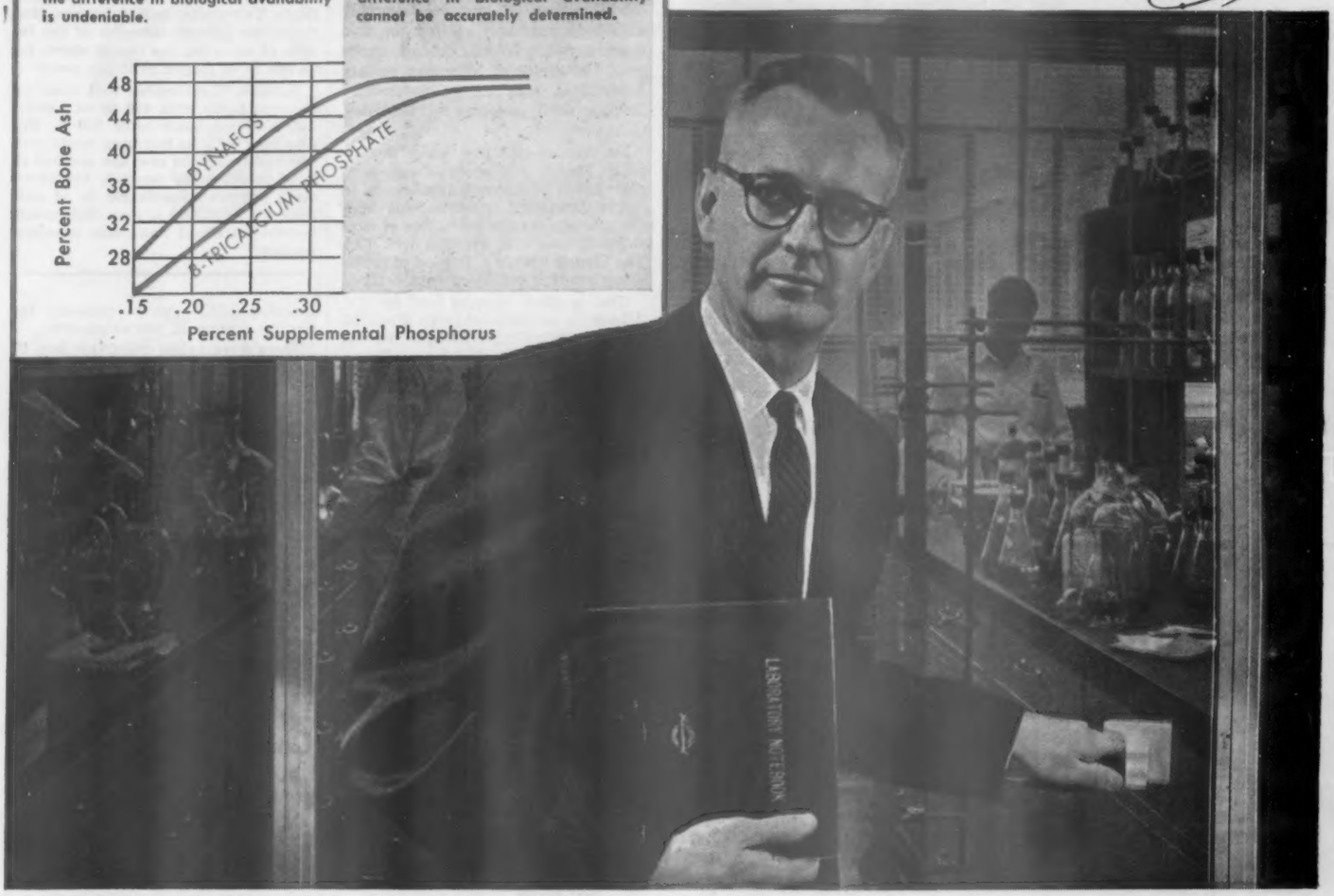

Dr. Herbert Peeler, Director of Animal Nutrition Research at IMC, supervises the "IMC test" of feed phosphate value — the testing technique used to maintain the high biological value of DYNAFOS.

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Dr. G. K. Davis Named To New Florida Post

GAINESVILLE, FLA. — The University of Florida has named Dr. George K. Davis, authority on the use of trace elements, as director of nuclear activities. His appointment to the new post has been approved by the state board of control and he will assume his new duties Sept. 1.

Dr. G. K. Davis

Dr. Davis has been on the staff of the university since 1942 as professor of nutrition in the college of agriculture and has done considerable research in the field of animal nutrition.

In his new position he will coordinate the work of nuclear study and research in all related departments including engineering, agriculture, medicine, physics and chemistry. He will also continue to supervise certain research grants in animal nutrition.

In other new duties Dr. Davis will be director of the nuclear sciences building; supervise the activities of the health safety officer; stimulate the coordination of all educational and research programs in nuclear science and engineering to facilitate the maximum use of facilities and personnel; support and promote the implementation of policies and programs recommended by the nuclear science policy committee after approval by the president; and be the principal contact between the university and outside agencies concerned with nuclear science, according to J. Wayne Reitz, university president.

He will also supervise and coordinate the presentation of budgets and personnel actions involving academic staff on the nuclear budget.

Study Shipping Effects on Eggs

LINCOLN, NEB. — Eggs shipped from the Midwest can be delivered to South American countries in a condition that will compete favorably with eggs currently offered for sale there, says Dr. John L. Adams, chairman, University of Nebraska poultry department, speaking at the Poultry Science Assn. meeting at Berkeley, Cal.

Dr. Adams said that while the average Haugh unit score of egg samples taken from retail markets in South American countries was 56.8, the average Haugh unit score of eggs shipped from the Midwest was 72.4. The Haugh unit is a method of measuring internal quality of eggs.

The project carried on by Dr. Adams in cooperation with Ford M. Milam, agricultural attache to the U.S. Embassy, Rio de Janeiro, Brazil, included 1,035 eggs to measure the quality decline in the shipments.

Eggs were taken from the Jan. 21 production of eight commercially available strains of hens and shipped from Lincoln, Neb., via New Orleans, La., to Brazil.

Dr. Adams said that sampling of all strains of eggs at Lincoln on the day produced, gave an average Haugh unit score of 84.65. Two days later, after traveling by refrigerated truck non-stop to New Orleans, the Haugh unit score average of all strains was 82.62. When the eggs arrived Feb. 21 at Rio de Janeiro, the average score of all strains was 72.4.

"Since the Haugh unit range for grade A eggs is from 55 to 79, this demonstrates the possibility of shipping grade A eggs to South American ports," Dr. Adams concluded.

25,000 LB. OF MILK PER COW PER YEAR?

LOGAN, UTAH — During the annual Utah State University Dairy Day Dr. C. F. Huffman, Michigan State University, told dairymen that "with our present concepts of the future of dairying, we should shoot for 25,000 lb. of milk a year per cow."

He said, "I remember well when we honored herds with 400 lb. of butterfat. Now we honor with 500 lb. Before long we'll be honoring herds with 600 lb. Though no cow has reached it, it is theoretically possible for maximum production of 50,000 lb. of milk with 4% butterfat a year. This would require excellent cows and excellent feeding."

Commercial Hog Farm

FABENS, TEXAS—One of the first commercial swine farms in the Rio Grande Valley has been developed by Rives and Howard Lee Davis, brothers and members of the Fabens FFA club.

Starting out three years ago, the two youths now have 50 sows and about 400 other pigs. They have built a modern plant, consisting of concrete floors, automatic feeders and waterers, and recently installed their own grinding and mixing plant.

The pigs are moved from one house to another as they gain weight, with the feed being changed to higher grain content as the animals progress. One hazard in growing swine here has been the summer heat, but the Davis brothers have installed sprinkler systems to keep the hogs cool.

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A sensing paddle, located at the desired material level, is constantly rotated by a shaded pole induction motor located in the casing outside the bin or container. The motor and its reduction gears are mounted on an extension of the paddle shaft. Whenever material restrains the paddle from turning, the motor and its mounting revolve about the drive shaft, actuating two switches mounted on the base of the indicator.

When material falls away from the paddle, an adjustable tension spring returns the motor and its frame to the initial position, releasing the switches and causing the motor to turn the paddle again.

For high-level indication or control, the motor runs continuously until paddle rotation is impeded by the rising level of material.

For low-level indication or control, the paddle is restrained by the material and in turn restrains switches until the material falls below the paddle. When this happens, an adjustable tension spring returns the motor assembly to the starting position, releasing the switches and again starting paddle rotation.

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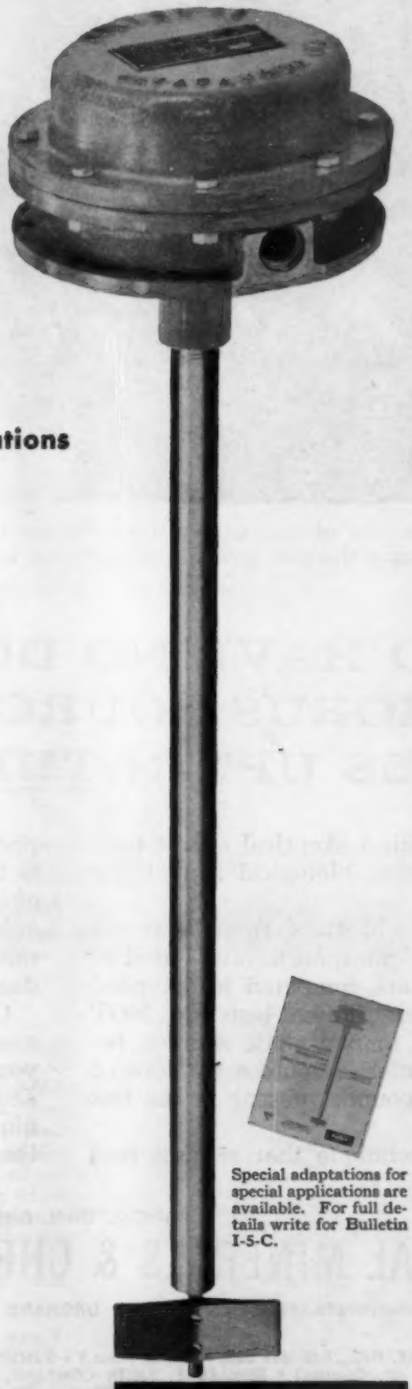

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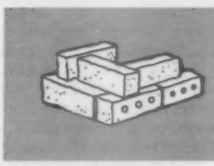

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Industry Leadership, Condemnations Topics at West Virginia Poultry Event

By PROF. H. M. HYRE
West Virginia University

MOOREFIELD, W.VA. — Leadership for the poultry industry and losses from condemnation were major topics for discussion at the West Virginia Poultry Convention held here.

Representatives of various segments of the poultry industry handled the discussion on the subject "Who Will Provide Leadership for the Poultry Industry?"

Moderator for the panel discussion was Alex Gordeuk, manager, poultry feeds department, Hales & Hunter, Chicago. Mr. Gordeuk pointed out that "we must lack adequate leadership" since the group wanted it discussed and continued to say that in the production of food and fiber there is a major revolution. He said there are three main causes: First, the technology of production can outstrip consumption, as in the broiler industry; second, money from outside sources, other than profits, has been and is being used, and third, poultrymen are dealing with a live animal, the chicken. After a poultryman once starts production he cannot stop until the end of the production period.

Ed Gaddis, a broiler grower from Forest, Miss., one of the members of the panel, discussed integration and maintained that the future of the poultry industry depends on a highly integrated program. Through such a program there can be better control and a lower cost of production is possible, he said.

Jerome Taub, president of the U.S. Poultry & Egg Producers Assn., advanced the thought that leadership for the poultry industry would come from the industry with government help. Mr. Taub advocated government controls, stating that production would be greater than consumption unless kept in check. He also stated that increased quality, promotion of consumption and integration would not solve the problem. Mr. Taub favors a federal act to control poultry production.

Richard T. Ammon, executive secretary of NEPPCO, favored private enterprise and stated that the leadership should come from the individual through such organizations as the West Virginia Poultry Assn., NEPPCO and similar organizations. Mr. Ammon recognized that prices are often depressed by an apparent overproduction of poultry and eggs. He believes that this situation can be helped by increased consumption, increased exports and sound business management on the part of producers and allied industries. He stated that too much credit is extended to growers and others who are poor risks. Mr. Ammon stated that the situation could be greatly helped with improved price reporting, good business management and proper use of credit.

Condemnation Losses

The subject of "Who Are the Contributors to Poultry Condemnation Losses?" was discussed by Charles Halterman of Petersburg, W.Va., a feed dealer and a broiler contractor; Earl Wise, manager of the Sterling Processing Plant, Oakland, Md., and Dr. Daniel DeCamp, assistant chief, Inspection Branch, Poultry Division, A.M.S. Prior to the panel discussion, T. R. Hash, West Virginia extension poultryman, pointed out that some growers have a much higher percentage of birds condemned than others.

Mr. Halterman stated that there were many different groups responsible for these condemned birds and he named the poultry breeders, hatcherymen, flock owners, contractors, growers, processors and the government. He believed that much of the trouble could be alleviated if all would cooperate in trying to improve the situation. He found one of the problems to arise from the fact that inspectors were not consistent—some condemned a much higher percentage of birds than others.

Respiratory Troubles

Mr. Wise finds respiratory troubles causing most of the condemnations at his plant. He wondered, however, if all processing plants were doing all they could to reduce losses. Bruises, killing methods and the handling of the birds all cause condemnations, he stated.

Dr. DeCamp stated that an effort is made to keep inspectors uniform in all plants. He listed the main disease-caused losses the inspection service has found in broilers as septicemia-toxemia, first; inflammatory processes, second; leucosis, third, and tumors, fourth. The inspectors find that losses due to contamination, overscalds and misbleeds are greater than the combined losses due to leucosis and tumors, he said. The inspectors' reports show that condemnation due to respiratory disorders, CRD, Newcastle disease and others are responsible for more condemnations than any other single disease syndrome in classes of young chickens.

• • •

Officers Elected At Poultry Parley

MOOREFIELD, W.VA.—The West Virginia Poultry Assn. elected Donald Baker of Moorefield as president during the 18th annual convention held here. He succeeded W. D. Tuckwiller of Lewisburg.

Other officers elected were James Duckworth, Lewisburg, vice president; Cecil Sheppard, Petersburg, treasurer, and Wilson H. Smith, Petersburg, executive secretary.

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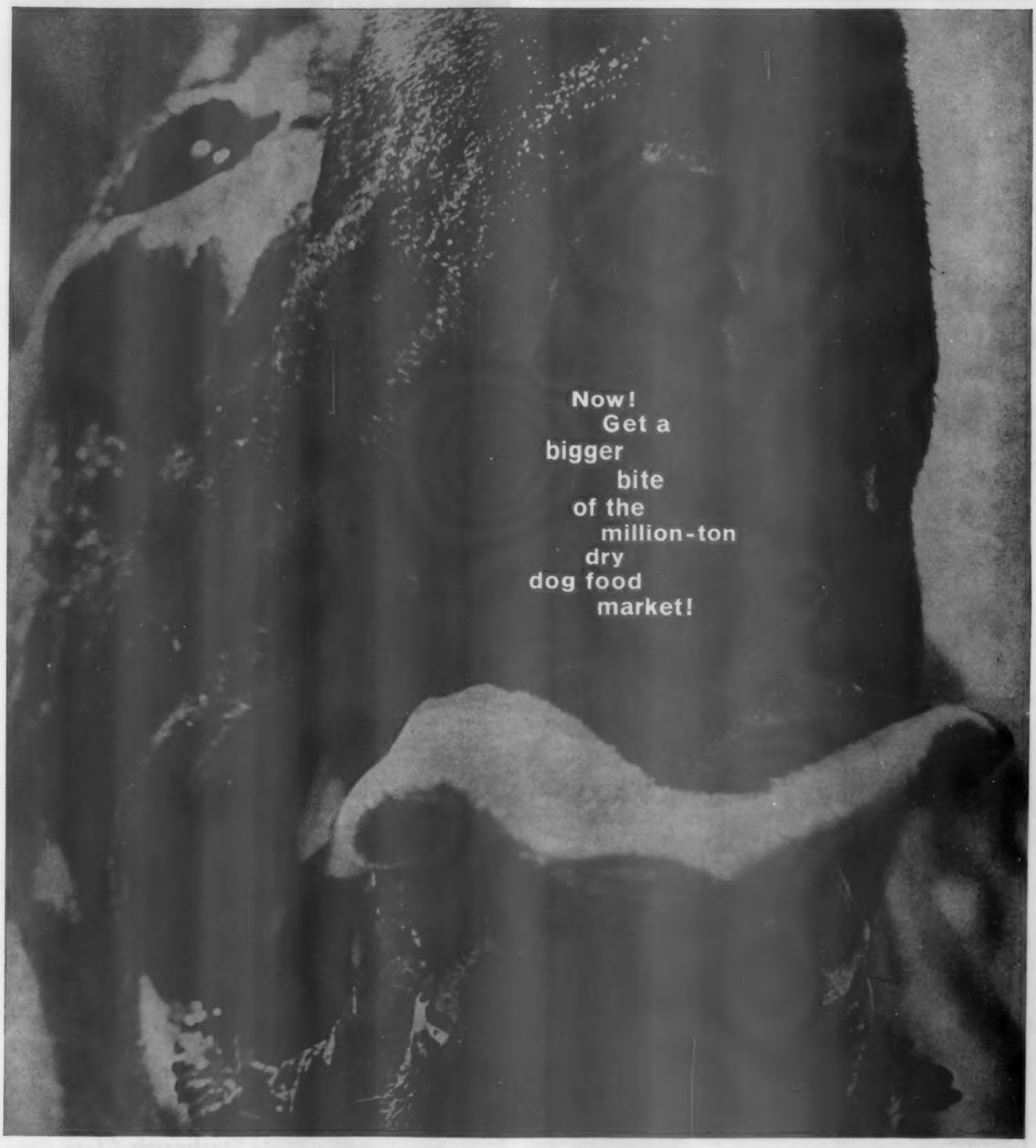

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BORDEN'S MG replaces dried whey on a pound-for-pound basis. Milk and Grain sources of whey factors...condensed whey solubles and fermented corn extractives, corn distillers dried solubles and dried whole whey in a dry free-flowing form. **BORDEN'S MRB replaces dried skim milk on a pound-per-pound basis.** Milk Replacer Base–high in protein and milk nutrients. Condensed whey solubles dried on soy flakes with added soy lecithin...flour like, free-flowing and easy to mix. Also available as HI-FAT MRB with 15% added choice white grease. **BORDEN'S CASEIN replaces high-cost horse meat or meat by-products.** A highly digestible protein of high biological value, comparable to protein in meat. The protein level is 86-88%–milk protein high in the amino acid lysine. **BORDEN'S CP#3 adds palatability and lasting taste appeal.** A standardized blend of cheese scrap dried on a free-flowing carrier. Easy to handle, inexpensive. **BORDEN'S PETPRO supplements cereal-base foods.** This all-in-one supplement contains whey, fermentation factor ingredients, liver and glandular meal, fish meal, fish solubles and all the essential microingredients, plus cheese powder for palatability.

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All building work, including the original mill, warehouse, and offices, was designed, engineered and constructed by our organization.

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OFFICERS—Officers and executive committee of the West Virginia Poultry Assn. are shown above. They are (seated left to right): Cecil Sheppard, Petersburg, secretary-treasurer; James Duckworth, Lewisburg, vice president; Donald Baker, Moorefield, president; Wilson H. Smith, Petersburg, executive secretary, and W. D. Tuckwiller, Lewisburg, retiring president. In the back (left to right), are: Ted R. Hash, Morgantown; Charles C. Blake, St. Mary's; Dr. Homer Patrick, Morgantown; Dave Van Meter, Petersburg; Ray Williams, Wolf Summit, and J. O. Flynn, Moorefield.

tee for the coming year, in addition to the officers and immediate past president, will be: Ted R. Hash, Morgantown, representing the agricultural extension service; C. C. Blake, St. Mary's State Department of Agriculture; Dr. Homer Patrick, Morgantown, West Virginia University College of Agriculture; Dave Van Meter, Petersburg, turkey grower; Ray Williams, Wolf Summit, NEPPCO director; Mike Sherier, Ellenboro, alternate NEPPCO director; J. O. Flynn, Moorefield, hatcheryman; H. G. Muntzing, Moorefield, Congress of Agriculture director; Sidney Larrick, Beckley, alternate Congress of Agriculture director; C. M. Boso, Washington, egg producer; Dick Skaggs, Lewisburg, broiler grower, and Charlie Davis, Yellow Spring, feed dealer.

A record 923 tickets were sold for the annual chicken barbecue and an estimated 3,000 people were on hand for the 45-minute parade which featured some 50 units, including floats, bands, drill teams and fire company equipment.

Among commercial floats in the parade, Shawnee Mills, Petersburg, took first prize. Second prize went to Rockingham Poultry Marketing Cooperative, Moorefield, and third prize to Yellow Spring Mills, Yellow Spring.

Queen Selected

The annual Poultry Queen Contest attracted a capacity crowd of more than 300 people. Judith Ann Burns of Moorefield was selected as the 1960 queen from a field of 19 princesses. Carolyn Chipley, Moorefield, was first runner-up and Sharon Davis, Buckhannon, was second runner-up.

Bernard Fansler of Mathias, W.Va., was chosen as the West Virginia FFA Star Poultry Farmer. At present he has 3,000 broilers and 300 laying hens.

NEW QUEEN—Donald Baker, newly-elected president of the West Virginia Poultry Assn., is shown here with the new West Virginia Poultry Queen, Judith Ann Burns. Mr. Baker's company, Baker's Feed & Supply Co., was a sponsor of Miss Burns in the queen contest.

G. D. Davis, Nopco Executive, Retires

NEWARK, N.J.—G. Daniel Davis, vice chairman of the board of directors of Nopco Chemical Co., was recently feted by Nopco's Fifteen-Twenty Five Year Employees Club at a testimonial dinner in honor of his retirement. The dinner was held in the Hotel Robert Treat, Newark.

Mr. Davis joined Nopco as a shipping clerk in 1916 and, in terms of total yearly service, is the oldest Nopco employee. In 1920, he was given charge of the Chicago office and as a result of his sales and organizational work was assigned to expand the company's activities in other areas.

Under his direction, new sales territories were opened in Canada, the South and New England. In 1923, he was elected secretary and director of Nopco and rose through the ranks to executive vice president where he was instrumental in guiding Nopco's development and growth.

Ralph Wechsler, chairman of the board of Nopco Chemical Co., announced that, in his retirement, Mr. Davis will continue to be associated as director and vice chairman of the board of Nopco.

Stockyards Close

SEATTLE, WASH. — The Seattle Union Stockyards has ceased operations. It received its last consignments of livestock on July 23. Closing of the Seattle yards makes three terminal livestock markets on the West Coast to have closed in a year's time. The other two were at San Francisco and Los Angeles.

Increased value of the land in all three instances, coupled with decreased volume of livestock receipts, were said to have been the governing factors in closing the stockyards. The Seattle property is in the heart of a heavily-developed industrial section.

WAREHOUSE PLANNED

CONRAD, IOWA—Green Products Co. has announced plans for a 45,000 bu. warehouse at its plant north of here. The warehouse, 32 ft. in diameter and 64 ft. tall, will be used for storage of Green Farm pelletized feeds. Todd & Sargent Construction Co., Ames, is to erect the structure.

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When you program your feed business the Vitamelk way, you establish a nutritional laboratory affiliation. You are backed by the vast resources and qualified personnel of Dawe's. You have a direct line to nutritionists, chemists, laboratory technicians, production people, field men, merchandisers . . . specialists all . . . men who know the intricacies of today's complex feed industry. Their goal is helping you program a more successful feed business. In effect, they are on your staff, but on our payroll.

Today's modern Vitamelk and the Vitamelk programs are based on over 30 years' specialization in vitamin nutrition and feed fortification. When you fortify with Vitamelk, Dawe's nutrition, merchandising, manufacturing and quality control know-how is yours, yet you pay for Vitamelk only. Write today for details of specific Vitamelk programs for poultry, swine, beef and dairy cattle.

This is the VITAMELK program:

1. VITAMELK—a comprehensive vitamin, trace mineral, antibiotic and unidentified factors fortifier. Full fortification in one package.
2. COMPLETE FORMULATIONS for farm-tested feeds.
3. TAG INFORMATION for today's complicated feed tag requirements.
4. COMPLETE FEEDER INSTRUCTIONS on how to use Vitamelk fortified feeds to best take advantage of their great built-in power.
5. DAWE'S QUALITY CONTROL laboratories are a remarkable help in solving special problems.
6. MERCHANDISING and sales counsel.
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WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

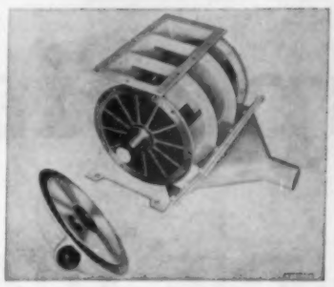
DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7080—Grain Expander

The V. D. Anderson Co. announces an improved "Anderson Expander" for use in making various expanded food products. According to company literature, it can produce 4,000 to 5,000 lb. expanded material an hour. Expanded foods have found acceptance due to their uniformity in manufacture, the fact that they can be fed either wet or dry and because they provide nutritious non-fattening value, the company says. One field where expanded grains are being increasingly utilized is in the pet food industry. The field has been growing to a point where it is estimated by late 1960 the annual production capacities of Anderson Expanders in the field will be approximately 25-30 million pounds a year, the company says. Information can be obtained by checking No. 7080 on the coupon and mailing.

No. 7078—Patented Feeder

A high pressure feeder recently developed and patented by the Day Co. is designed for trouble-free pneumatic conveying, the company says. To maintain product flow, high pressure filtered air enters hollow end bells on each end of the feeder and enters the feeder pockets near the product discharge point. The double inlet action mixes air with the product being conveyed, the company says, and this action sweeps the pockets clean and increases volumetric efficiency. Another feature of the "Air Swept" feeder,



according to the company, is the way in which the air chambers keep a blanket of air between the product and the bearings, preventing contact that might gum up the bearings and the rotor shafts. For more information, check No. 7078 on the coupon and mail.

No. 7087—Vitamin E Product

"Stabimix E," a supplemental source of vitamin E, is the second stabilized dry vitamin product added to the chemical division line of Merck & Co., Inc. Designed for specific use in poultry and turkey feeds, the product is a dry, stabilized feed supplement containing either 20,000 or 50,000 international units of vitamin E per pound. According to the company, the product has the following advantages: Rapid absorption in the GI tract; free-flowing in hot or cold weather; desirable particle size; full stability under humid conditions; full stability under normal pelleting, and full stability in mineral mixes. It permits the vitamin to be fully active biologically, the company says. Each of the two potencies will be available in 50 lb. fiber drums with liners. For more information, check No. 7087 on the coupon and mail.

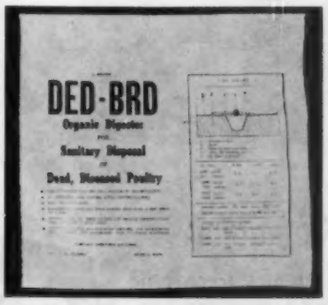
No. 7079—Antibiotic Bulletin

A 12-page technical bulletin containing information about "Gallimycin-10" for low-level growth stimulation in broiler rations and breeder feeds, has been released by Abbott Laboratories. Bulletin No. 560 describes the composition, packaging, uses and proved effectiveness of the

product as a non-medicated feed additive. Full details and results of studies at agricultural colleges and experiment stations plus numerous field tests in all leading poultry areas of the U.S. are covered. Copies of the bulletin can be obtained by checking No. 7079 on the coupon and mailing.

No. 7084—Organic Digester

"Ded-Brd," a sanitary method for disposal of dead, diseased poultry, has been introduced by Ryter Corp. The product is an enzyme and live



bacteria formula. User digs hole in the ground for a pit and can dispose of a large number of birds at one time. It will not draw flies and is odorless, the company says. For more information, check No. 7084 on the coupon and mail.

No. 7086—Egg Color Film

"The Margin of Difference" between successful and unsuccessful egg production operations is the subject of a color film produced by Hess & Clark. The 12-minute sound slide film is available for showings to any farm or poultry organization, as well as vocational-agricultural teachers, 4-H and FFA leaders, the company says. The film points up the need for poultrymen to place all factors of performance in proper balance. The

company's Full Performance Index is covered. For more information on how to obtain the film, check No. 7086 on the coupon and mail.

No. 7085—National Parts Service

Productive Acres Manufacturing Co., Inc., announces the formation of a nationwide parts service for bulk delivery trucks. The service ties in with the company's reconditioning and rebuilding service for owners of used bulk delivery trucks. The new Pamco parts service points are located in Oskaloosa, Iowa; St. Paris, Ohio; Jefferson, Ga.; Portland, Ore.; East Grand Forks, Minn.; Tulsa, Okla.; Austin, Texas; Tupelo, Miss.; Franklin, Ky.; Shelby, N.C., and Bridgeville, Del. For full details, check No. 7085 on the coupon and mail.

No. 7088—Trace Mineral Salt

Morton Salt Co. has announced a newly formulated multi-purpose trace mineralized mixing salt. The product provides salt, manganese, iron, copper cobalt, iodine and zinc for use in mixing in beef, dairy, sheep and mature swine feeds, the company says. With the new product, the elements are available in a form that is insoluble in water and less likely to be leached from salt or feed mixtures when exposed to moisture in the air or pelletizing process, the company says. All of the compounds are compatible with other feed ingredients, company literature says. For more information, check No. 7088 on the coupon and mail.

No. 7082—Enzyme Hydrolyzed Casein

A low cost, technical grade of enzyme hydrolyzed casein is available from Amber Laboratories, Inc. Called "Amber EHC," the product contains more than 13% total nitrogen of which at least 30% is amino nitrogen. It is a water soluble powder, packed in 100 lb. drums with polyethylene liners. It is used as a microbiological nutrient in the fermentation industry and can also be used in pesticides and agricultural formulations and as a chemical intermediary in many processes. For details, check No. 7082 on the coupon and mail.

No. 7081—Utility Body Bulletin

A utility body produced by Baughman Manufacturing Co. that can be used to transport either bulk or bagged material is described in a bulletin published by the company. According to company literature, the "Du-All Feed Body" can be used to haul bulk or bagged feed, grain, livestock and other commodities. The front end discharge stack provides for easier spout positioning and leaves the tailgate free for loading and unloading merchandise other than grains. For copies, check No. 7081 on the coupon and mail.

Send me information on the items marked:

- ☐ No. 7078—Patented Feeder
- ☐ No. 7079—Antibiotic Bulletin
- ☐ No. 7080—Grain Expander
- ☐ No. 7081—Utility Body Bulletin
- ☐ No. 7082—Enzyme Hydrolyzed Casein
- ☐ No. 7083—Batch Mixing Mullor
- ☐ No. 7084—Organic Digester
- ☐ No. 7085—National Parts Service
- ☐ No. 7086—Egg Color Film
- ☐ No. 7087—Vitamin E Products
- ☐ No. 7088—Trace Mineral Salt

Others (list numbers) .....

NAME .....

COMPANY .....

ADDRESS .....

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No. 7083—Batch Mixing Muller

Frederic B. Stevens, Inc., has introduced a new "Stevens Muller." The muller is designed for batch mixing of a wide variety of dry and semi-dry products such as chemicals, foodstuffs, fertilizers, grains and feeds

and other materials. It has a rated capacity of up to 400 lb. and other features include a low silhouette, compactness—requiring only 7 sq. ft. floor space, fast mixing and maintenance free operation, the company says. For further information, check No. 7083 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7040—General bulletin, B-I-F Industries.

No. 7041—Portable power unit, Big Dutchman Automatic Poultry Feeder Co.

No. 7042—Feed mill bulletin, Seco, Inc.

No. 7043—Dairy premix, Specifide, Inc.

No. 7044 — Fat handling unit, Thompson-Gill, Inc.

No. 7045—Bag, bulk body, New Way Manufacturing Co.

No. 7046—Cattle self feeder, Brower Manufacturing Co.

No. 7047—Mixing salt, The Morton Salt Co.

No. 7049—Sewing attachment, Bemis Bro. Bag Co.

No. 7050—"Eggtober" program, Chas. Pfizer & Co., Inc.

No. 7051—Low-level antibiotic clearance, Abbott Laboratories.

No. 7052—Bulk feed bodies, Simonsen Manufacturing Co.

No. 7055—Feed pelletizing binder, Consolidated Water Power & Paper Co.

No. 7056—Standard utility building, Behlen Manufacturing Co.

No. 7057—Swine management materials, SIU Foundation.

No. 7058—Feeder, rotary valve bulletin, Fuller Co.

No. 7059—Face fly repellent, Myzon Laboratories.

No. 7060—Rolling egg cart, Big Dutchman Automatic Poultry Feeder Co.

No. 7061—Bulk truck information, Sprout, Waldron & Co., Inc.

No. 7062 — Magnesium bins, Tote System, Inc.

No. 7063 — Storage bin payment plan, Ripco Air Systems

No. 7064 — Mill service brochure, U. E. Fitzpatrick & Co.

No. 7065—Special Pen-FZ promotion, Hess & Clark

No. 7066 — Control panel system, Shanzer Manufacturing Co.

No. 7067 — Three section probe, Burrows Equipment Co.

No. 7068—Treatment for sinusitis, Hess & Clark, Inc.

No. 7069 — Chain poultry feeder, James Manufacturing Co.

No. 7070 — Steel cable socket, Brooks Machine & Mfg. Co.

No. 7071 — New bulk body model, Winger Manufacturing Co.

No. 7072—Portable sprayer, O. W. Kromer Co.

No. 7073—Antibiotic bulletin, Abbott Laboratories

No. 7074—Self-unloading feed body, Baughman Mfg. Co.

No. 7075—New UGF source, Chas. Pfizer & Co., Inc.

No. 7076 — Moisture tester check, Seedburo Equipment Co.

No. 7077 — Power shovel hook, Brooks Machine & Mfg. Co.

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JOE BROOKS

BY AL P. NELSON

Mary Has An Idea

Mary Brooks, as a member of the Hansen's Creek Women's Club, had spent most of the day in a nearby city with other members attending a consumers' panel staged by a large department store. It was almost 5 o'clock when she alighted from a friend's car at the feed mill.

Walking into the office she saw a worried Joe Brooks and Rusty Hagen, the bookkeeper. The twins, Joe, Jr., and Jim, had taken over the office desks and were making toy airplanes. Paper, scissors, glue and crumpled sheets lay everywhere.

"Well, for Heaven's sake. What's this?" Mary asked in surprise. "You boys aren't bothering father and Rusty, are you?"

"Oh, no, Ma," smiled Joe, Jr. "We aren't taking up much room. They can work if they want to."

Rusty Hagen rolled his eyes toward the ceiling. Joe winked at Mary and jerked his head. Then he went into the salesroom and Mary followed.

"They took over the office a couple of hours ago after they came back from the swimming pool!" he exclaimed. "Rusty and I were out checking stock in the store. When we came back the boys were at our desks."

"Why didn't you chase them out?" Mary asked.

"I was afraid they'd get into trouble somewhere," Joe said. "They've got ants in their pants. They wanted to tour the mill and push panel buttons. You know how they climb on everything. Then they wanted to feed the hogs and calves in the demonstration pens. How do you stand them all day long?"

Mary sighed. "So at last you realize that a mother works hard in bringing up children. It's a chore, but I usually arrange games for them and then leave them to themselves, except for an occasional peek-in. It's the planning that does the trick. And when school is in session, it's better. Then the teachers have the headaches."

"Thank heavens I'm running a feed mill!" Joe growled. "I'm nervous as a loon for fear that those guys will climb or fall and break their necks. In the office, at least, I can keep my eyes on them."

Mary Has Plan

Mary looked at the tiny wrist watch on her trim arm. "Oh, it's almost half past five. Let's all go to the White Swan for dinner, Joe. I haven't bought any meat for our meal at home. Besides, you and the twins need an evening out. And then I have a business idea for you."

"Okay," agreed Joe, "I'll especially appreciate a good business idea today, after what I've been through with the kids."

So they went to the air-conditioned White Swan. The twins ate their soup, also Joe's and Mary's crackers and cleaned out the basket of breads before their parents even had a nibble of these things.

The prime ribs of beef au jus were delicious, although Jim said, "Mom, I can't cut my beef. It almost slipped off my plate."

But the twins were soon munching contentedly on the beef Mary had cut into small pieces.

"Mary," said Joe, now more relaxed, "what's this business idea?"

His wife smiled. "Joe, some people condemn women for belonging to clubs and all that and going to meetings. But one learns a lot about people and the world and business, too, at these meetings. At the department store panel today, the department heads asked the 10 panel members what they liked and didn't like about their store and product. They also asked for suggestions on how to please customers."

"What happened?" Joe asked.

Mary smiled and her blue eyes twinkled. "Joe, store brass really got an earful. You know women. They don't pull any punches when it comes to clothes and things like that."

"I'll bet," Joe agreed.

"Why those department heads just sat there stunned. They heard things they never heard before, I believe. The women told about how many snooty clerks they had in that store—how they didn't like to go to the work of bringing out all the yard goods bolts to please customers — how they looked bored while customers were inspecting material, etc. It went on and on. There were very few compliments."

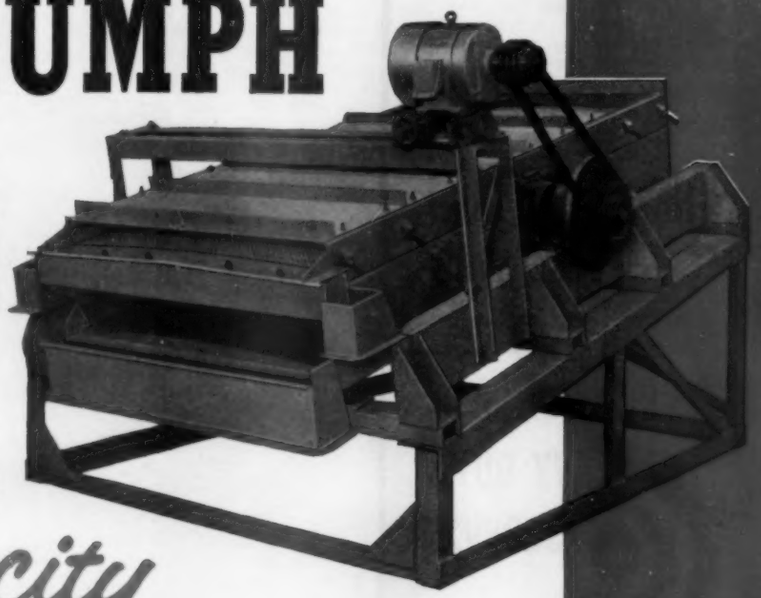
Thanks Women

"Well, I have to hand it to the head of the store," Mary went on. "He is a chunky, grey-haired man with thick spectacles. He thanked the women for

(Turn to page 72)

TRIUMPH

NEW



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1. Patent applied for

*OMAFAC is a Squibb trademark

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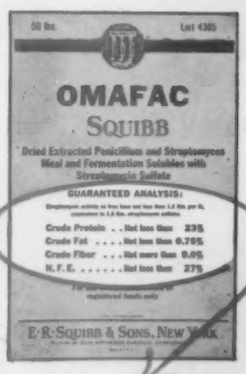
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GUARANTEED ANALYSIS:
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Crude Fat . . . . Not less than 0.75%
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N.F.E. . . . . Not less than 27%
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2. New, Low-cost PROTECKOTE

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Proteckote costs you about one-third less than Tetrakote. We repeat we honestly think Proteckote does as good a job as Tetrakote. Against this, however, is the fact that we have had only two years of practical experience with it compared to the ten years of proof on Tetrakote.

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In offering these two products we say this: We know that some grain men will want the insurance which Tetrakote has repeatedly proved it offers. That's why we are retaining Tetrakote in our line. On the other hand, many grain men will say: "If Douglas says Proteckote is good, it's good enough for me! And I would like to make that saving!"

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ECONOLOG
Is a new free flowing source of vegetable fat (lecithin, vitamin E and Tocopherol) for all livestock and poultry feeds. It's pleasant odor and its superior flavor improves palatability while adding the health benefits of increased fat.

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telling him these things. He said a store's sole purpose is to please customers—to sell them what they want. Now, he said, he and his staff would have a much better idea of how to train sales people and give better service."

Joe nodded, then tucked Jim's fallen napkin under his chin as he dug his spoon into his cherry sundae.

"Joe, I thought as I listened that we have asked our employees time and again how to improve our business and increase efficiency, but we have never asked our customers, have we?"

"Oh, we have had surveys of a sort now and then," Joe said.

Mary smiled. "That's true. But why don't we come right out, Joe, and offer some real money for the best suggestions on how we can improve our services to customers? Why don't we offer cash prizes of $15 for the best suggestion, $5 for the second, $3 for the third and $2 for the fourth? That's definite payment, and I think it will induce people to think out some real suggestions. And let's hear the complaints, too. We can take it."

"Why not make those prizes trade credits and not cash?" Joe asked.

Mary shook her head. "No, Joe, I think the actual cash will have more appeal."

Joe signaled the waitress for another cup of coffee. "There's merit in your plan, Mary. I'll bet lots of customers have ideas how we can improve our service to them. But they won't tell us unless we make it worth their while. With the cash prize in mind, some probably will actually sit down and write out a suggestion. Even one solid suggestion will pay for this plan."

Mary was happy that Joe seemed agreeable to her plan. "And don't forget, Joe, the publicity we get because we show we want suggestions for improving service to customers will build much good will for us. The way that department store president stood up and thanked the ladies for calling attention to his store's deficient policies was wonderful. I have a lot more respect for him, and so have the other women. They know he is going to do all he can to correct those merchandising faults that the panel revealed, and that his store is going to be a better place at which to trade."

"Yes," Joe mused thoughtfully. "A merchant must always keep the customer in mind and find out if he is satisfied. New products, new machinery, excellent displays and all that are important assets in any business, but the art of pleasing the customer must not be forgotten in this modern rush to excel. Without well satisfied customers a business is nothing."

Staff Veterinarian Appointed by Geigy

ARDSLEY, N.Y. — Geigy Agricultural Chemicals, division of Geigy Chemical Corp., has announced the appointment of Dr. Robert T. McCarty as staff veterinarian in the research department.

Dr. McCarty will direct the veterinary product development program at Geigy and, in addition, will be responsible for liaison with clinics and schools of veterinary medicine in the U.S.

Dr. McCarty obtained his D.V.M. degree from the school of veterinary medicine, Texas A&M College, in 1949. He comes to Geigy with several years experience in the commercial as well as clinical research fields.

AID PENB RESEARCH

PORTAGE, WIS.—Farmers supplying eggs to the Kroger Co. egg plant here will make a cent-a-case voluntary contribution to the Poultry & Egg National Board for research, consumer information and education, M. T. Harrington, plant manager, said recently. The objective of the national board is to boost consumer demand for eggs and poultry meats.

Louisianan weatherman to radio announcer: "Better break it to 'em gently. Just say, 'Partly cloudy, with scattered showers followed by a hurricane'."

◆ ◆ ◆

The following correction appeared in a small town paper: "Our paper carried the notice last week that Mr. John Jones is a defective in the police force. This was a typographical error. Mr. Jones is really a detective in the police farce."

◆ ◆ ◆

Prisoner to fellow inmate: I was making big money—about a quarter of an inch too big.

◆ ◆ ◆

The kids were being taken on a tour of the government mint.

"Why is it," one kid asked, "that they stamp 'In God We Trust' on the pennies?"

"That," explained the guide, "is for the benefit of people who use them for fuses."

◆ ◆ ◆

"You should advertise!" the canvasser told the proprietor of a small neighborhood store.

"No, sir! I'm agin it," was the emphatic answer.

"But why?"

"Advertising don't leave a man no time," the man replied. "I tried it once last year and I was so doggone rushed I couldn't get in no fishin' all summer."

◆ ◆ ◆

Customer (to waiter): What's this Brigitte Bardot special?

Waiter: Stuffed tomato with very little dressing, Sir.

◆ ◆ ◆

"Say, waiter, I ordered a strawberry shortcake and you brought me a plate of strawberries. Where's the cake?"

"Well, sir, that's what we are short of."

◆ ◆ ◆

Mr. Jones (on phone): Hello? Dr. Smith?

Doctor: Yes.

Mr. Jones: My wife has just dislocated her jaw. If you should be in the neighborhood in the next couple of weeks or so, maybe you'd drop in and have a look at her.—**Typographic.**

◆ ◆ ◆

Women are funny creatures. But generally they fall into three broad classes. The beautiful, the clever—and the majority.

◆ ◆ ◆

A bride and groom came down to breakfast in the hotel where they had spent the first night of their honeymoon.

"Now, be casual and offhand and they won't know we're newlyweds," cautioned the groom.

While he studied the menu, his bride gave her order to the waiter: "Tea and toast without butter, please."

Whereupon her husband exclaimed in a voice everyone in the place could hear: "Good heavens, is that all you eat for breakfast?"

◆ ◆ ◆

Imagination is what makes you think you're having a wonderful time when all you are doing is spending money.

NUTRITION SCHOOL—Approximately 250 feed manufacturers and members of allied industries attended the 11th Annual Nutrition School for Feed Men held recently at the University of Wisconsin. Shown in the photos above are speakers and representatives of companies in industry who attended the conference. From left: Dr. H. R. Bird, University of Wisconsin; Paul Mattson, Morton Salt Co., Chicago; Dr. Wilbor O. Wilson, University of California; Laddie L. Smisek, Hales & Hunter Co., Chicago; Dr. J. K. Matsushima, University of Nebraska; Dr. E. J. Underwood, University of Western Australia; Dr. Robert H. Grummer, conference chairman, University of Wisconsin; Dr. W. W. Cravens, McMillen Feed Mills, Decatur, Ind., and chairman of the AFMA Nutrition Council; Dr. E. H. Fisher, University of Wisconsin; Dr. E. W. Crampton, Macdonald College (McGill University), Quebec, Canada, and Dr. Robert Bennison, DeKalb Feed Co., DeKalb, Ill.

To Open Educational Campaign to Thwart Cholesterol Scare

CHICAGO — The Poultry & Egg National Board will launch in September an educational campaign addressed to physicians, nutritionists, nurses and dietitians, according to Lloyd H. Geil, general manager.

Mr. Geil stated that "the many conflicting articles which have appeared in the medical press during the last several years have led to considerable confusion among medical men." Cholesterol was—and in some quarters still is—accused of being an important factor in causing atherosclerosis and heart disease, he said. In other quarters it is stated that the cholesterol in foods eaten has little or no influence on the amount of cholesterol circulating in the blood and that other factors must assume the blame for the high incidence of heart disease.

Though the problem of what really causes heart disease may not be settled for years, the fact that cholesterol has been accused and that egg yolk contains cholesterol, has influenced many physicians not only to stop eating eggs themselves but also to advise their patients not to eat them.

Family Influence

When a doctor's patient is critically ill with heart disease, his diet, of course, has to be adjusted. But in some instances, in the opinion of Mr. Geil, the advice, "no eggs," has been given quite indiscriminately, frequently without regard for the patient's age, state of nutritional health and nutritional needs. An unfortunate consequence of such advice—not to eat eggs—is the influence it exerts on the patient's family: When one member of the household is told that a certain food would be harmful, all too often that food becomes taboo for every member of the family, relatives and friends.

"To stem this tide and to direct it into more justified channels, the Poultry & Egg National Board will focus the attention of the professional groups on the remarkable nutritional value of eggs, on their easy and complete digestibility for people of every age and on the important point that eggs have a well-merited place in the diet, not only in health, but also in most instances when disease or convalescence calls for dietary adjustment," Mr. Geil stated.

Fund Campaign

The three-year program of research and education aimed at the medical profession involves a special $50,000 fund raising campaign for the first year to get the program started. Industry and associations concerned with egg consumption are making major contributions to this urgency fund, Mr. Geil said.

The loss of egg consumption, due to cholesterol fear, was further confirmed by the results of the USDA marketing research report No. 405, just issued, titled "Homemakers' Use of and Opinions About Eggs," in which 7% of those interviewed were hesitant to eat eggs because of health reasons. Projecting this 7% nationally, it could mean that the cholesterol scare is taking 12,420,000 cases of eggs off the market each year. This could mean a loss of $111 million to egg producers, with subsequent losses to hatcherymen, feed manufacturers, dealers, equipment firms and pharmaceutical companies, as well as retail food store operators.

CHOLESTEROL—Sam R. Honegger (left), head of Honegger Farms Co., Inc., presents a check for $1,000 to Lloyd H. Geil, general manager, Poultry & Egg National Board, for that organization's educational and advertising campaign to clarify misunderstandings regarding cholesterol contained in egg yolks as an important factor in causing atherosclerosis and heart disease.

Says Fowl Cost U.S. $10 Million

WASHINGTON—The federal government has spent more than $10 million buying and processing chickens that were treated with stilbestrol, Representative Leonor Sullivan (D. Mo.) says.

The program was ordered last December after the Food and Drug Administration determined that traces of the hormone — stilbestrol — remained in the skin of chickens being sold to the public. The use of stilbestrol has since been voluntarily dropped by the poultry industry.

Mrs. Sullivan said in a radio interview the chickens are being canned minus the skin for welfare organizations.

A Department of Agriculture spokesman said that the cost is nearer $7 million.

Australian Lambs Fed In San Francisco Corral

SAN FRANCISCO, CAL. — Some 17,000 or more Australian live lambs from the fourth shipment of the S. S. Delfino were reported to be feeding on pellets in the corral adjacent to Pier 92 on the state-owned Harbor Board land.

The original number of Australian lambs of this fourth shipment from Sydney was 25,270; 588 died en route and were thrown overboard. During the 30-day quarantine at San Francisco, 362 died in the corrals. This leaves 24,320 to be marketed.

Of this number, some 6,700 to 7,000 more or less were sorted out and shipped commencing the week of July 12 to the Goldring Packing Co., Los Angeles, at an unrevealed price or terms. One source indicated the first lambs went at 18½¢ or thereabouts. with a spokesman for Stock & Feed, The corporation set up to receive, feed and sell the lambs in California, inferring the price was a daily variable one dependent on market conditions.

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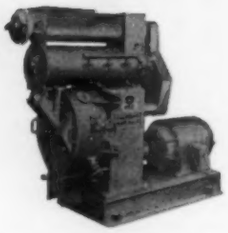

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Bemis First Half Earnings Up 16%

BOSTON — Bemis Bro. Bag Co. sales for the first six months of 1960 were $66,357,068, an increase of 4% over the comparable period last year, and the company's net income was $1,529,526, or 16% higher than a year ago.

Company officials said earnings per share of common stock were $2.15 for the first six months as compared with $1.84 in 1959.

In a quarterly report to stockholders, F. G. Bemis, chairman, and Judson Bemis, president, said they anticipate that operations in the last six months of the year will compare favorably with those of the first half.

In the three months ended June 30, the company's earnings were $1.13 per share of common stock as compared with 92¢ a year ago.

Bemis manufactures paper, textile and plastic bags and other forms of flexible packaging.

Diet Factor in Early Production of Milk

KNOXVILLE, TENN. — Feeding a dairy heifer too much or too little can affect early milk production when it's grown. Twin heifers, used in tests at the University of Tennessee Experiment Station, apparently have proved that point.

Identical twins were used. In one test, five pairs of twins were in the group. Overfed, fattened heifers weighing a third above normal, produced only 85% as much as their normal twins. That was in the first milking period. In later milking periods, the overfed animals were still producing milk at below normal rate.

In the opposite group, heifers "seriously" underfed started milking at 25% below normal. That also was the first milking period. But in second and third periods, the underfed animals "have milked normally" although they still were undersized.

Worst feature in connection with the underfed heifers was the loss of heifers and calves "due to calving difficulties of the small, weakened heifers."

In tests with five pairs of twins results were better at three years than at two. "These studies indicate that early calving is preferred because of reduced growth expense and earlier production returns," was the report.

Conducting the tests were Eric W. Swanson, S. A. Hinton, L. M. Carpenter and A. C. Carmen.

Pamco Forms Bulk Truck Parts Service

OSKALOOSA, IOWA — Formation of a nationwide parts service for bulk delivery truck owners and appointment of an exclusive distributor of its products for Germany have been announced by Productive Acres Manufacturing Co.

The new parts service ties in with Pamco's new reconditioning and rebuilding service for owners of used bulk delivery trucks. "Pamco helps stabilize a unit to your present used body, regardless of style, design or make," firm officials say.

The new Pamco parts service is available through the nationwide network of installation and service points. Installation and service points are located at Oskaloosa; St. Paris, Ohio; Jefferson, Ga.; Portland, Ore.; East Grand Forks, Minn.; Tulsa, Okla.; Austin, Texas; Tupelo, Miss.; Franklin, Ky.; Shelby, N.C., and Bridgeville, Del.

Pamco also announced the appointment of Albert Stutzle, Uhlandstra 5, (23) Bremen, Germany, to handle the exclusive sales of all Pamco equipment.

Pamco, Inc., manufactures hydraulic-driven bulk feed handling equipment.

$4,000 Given for Milk Fever Study

TUCSON, ARIZ. — International Minerals & Chemical Corp. has made a $4,000 research grant to the University of Arizona College of Agriculture.

The funds will be used for a study on the relationship of phosphorus and milk fever of dairy animals, according to Harold E. Myers, dean. The study will be made by members of the dairy department.

DIES IN CALIFORNA

SAN FRANCISCO — John Lawler, 72, general manager of the Poultry Producers of Central California from 1920 to 1953, died here recently. Mr. Lawler, for years director and agricultural chairman of the San Francisco Chamber of Commerce, held a citation from the University of California for his role in developing markets for California poultry.

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CALENDAR

(Continued from page 32)

of American Poultry Industries; pres., Harold M. Williams, 59 E. Madison, Chicago 2.

Feb. 19-21—Midwest Feed Manufacturers Assn.; Hotel Muehlebach, Kansas City, Mo.; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Feb. 19-21 — Ohio Grain & Feed Dealers Assn.; Neil House, Columbus; sec., George G. Greenleaf, 5625 N. High St., P.O. Box 121, Worthington.

March 8—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati, Ohio; L. E. Carpenter, Executive Director, Distillers Feed Research Council, 1232 Enquirer Bldg., Cincinnati 2.

March 16-17—Oregon Feed & Seed Dealers Assn.; Sheraton-Portland Hotel, Portland; mgr., Russ Hays, 702 Lewis Bldg., Portland 4.

March 20-24—Grain & Feed Dealers National Assn.; Washington, D.C.; sec., Herbert L. Sharp, 400 Folger Bldg., Washington 5, D.C.

April 10-13—Poultry and Egg National Board; Sheraton Towers Hotel, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

April 27-29—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson.

April 23-28—Grain Elevator & Processing Superintendents; Baker Hotel, Hutchinson, Kansas; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

May 7-10—American Feed Manufacturers Assn. Convention and National Feed Show; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 West Jackson Blvd., Chicago 4.

Oct. 22-24—Midwest Nutrition Conference; Hotel Muehlebach, Kansas City, Mo.; sponsored by Midwest Feed Manufacturers Assn.; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

1962

Aug. 13-18—12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Society, Sydney, Australia; Dr. Cliff D. Carpenter, chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

Denver Poultry Firm Tells Expansion Plans

DENVER, COLO. — Mountaire Farms of Colorado, Inc., successor to Maplecrest Farms of Colorado, Inc., has announced plans for expansion "which will make Denver the center of one of the West's largest independent poultry operations."

Dale W. Claus, president, said the firm's $100,000 expansion will double the size of the processing, refrigerating and storage facilities and will add a new fleet of refrigerated trucks.

Mr. Claus said the firm's recent purchase of the 560-acre farm of Mr. and Mrs. Carl Sheets near Elizabeth will enhance the company's growing operations. Modern facilities are now being built there.

Rhodes Ranch, Inc., said to be the West's oldest poultry and egg specialty house, was acquired by Mountaire last December and now is being operated as an independent subsidiary under the management of Jack Astle at 1550 W. Colfax Ave.

Officers of the firm at 1410 Cottonwood St., besides Mr. Claus, include Robert A. Grimes, secretary; G. Ted Cameron, vice president, and Eldon Risser, treasurer. Mr. Claus has been active in the poultry business in Denver for the past 25 years; Mr. Grimes is a poultry veteran with more than 30 years' experience, while Mr. Risser served the predecessor firm since 1945. Mr. Cameron is president of Cameron Feed Mills, North Little Rock, Ark.

DAMAGE SET AT $100,000

WINCHESTER, KY. — Damage estimated at $100,000 was suffered by the Browning Turkey Farm as fire swept through the company's hatchery and refrigeration plant. The blaze razed a two-story supply building at the hatchery, one of the largest turkey plants in the eastern part of the nation. About a million pounds of birds ready for shipping were in the refrigeration building.

Rabies Causing Heavy Losses of Livestock

BATON ROUGE, LA. — Rabies is causing considerable losses among livestock.

The American Foundation on Animal Health notes there was a 400% increase in rabies among hogs throughout the nation during a four year period. And the report revealed a 300% increase among sheep and 33% increase among cattle during the same period.

Louisiana State University scientists recommend the growing threat be curbed before it becomes a problem in Louisiana. Because rabid wild animals such as foxes and skunks are believed to be chief spreaders of the dread disease on farms, it is suggested that area-wide eradication programs include skunks, foxes and other carriers, and that all dogs in the area be vaccinated.

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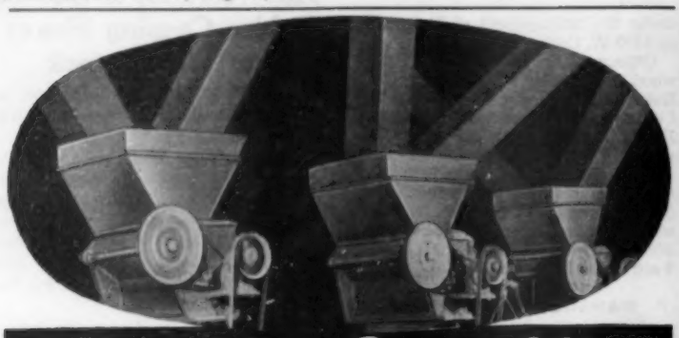

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RESEARCH AWARD WINNERS—When Dr. F. Howard Kratzer (center), University of California, Davis, was presented with the 1960 American Feed Manufacturers Assn. $1,000 award for outstanding poultry nutrition research during the 49th annual meeting of the Poultry Science Assn., the ceremony featured two previous winners of the AFMA award. The citation, announcing the PSA selection, was read at the awards banquet Aug. 4 by Dr. L. D. Matterson (right), University of Connecticut, who won the award in 1957. The AFMA check for $1,000 was presented by Dr. W. W. Cravens (left), chairman of the AFMA Nutrition Council and director of research, McMillen Feed Mills, who won the award in 1950 while a member of the staff of the University of Wisconsin.

Sees More Hog Specialization But Little Integration

AMES, IOWA—Hog and corn production may some day be separate enterprises for different farms, the American Farm Economics Assn. was told.

Oswald Blaich, U.S. Department of Agriculture economist at the University of Minnesota, said many factors which originally made combined corn and hog production successful are now being destroyed. He foresaw specialized hog farms, with trained managers, special veterinarian service and professional feed advisors.

However, he added, the hog farm of the future probably won't be a vertically integrated setup, but instead will be a highly specialized operation.

Mr. Blaich felt that "vertical integration of hog production with feed manufacturing is likely to be weak and transitional" until the "new entrepreneurs of the hog producing industry" take over.

He predicted that in the transition to hog specialization, "some of the weaker forms" of vertical integration would appear, but that "such vertically integrated structures may fall under the pressure of specialization.

"There already is a tendency for some feed dealers to specialize by engaging only in growing and fattening and to depend on the feeder pig market for their supply."

Mr. Blaich pointed out that multiple farrowing is changing hog production from a part-time to a full-time job. Labor and management for hogs can no longer be drawn from off seasons in corn production. Research is lowering the disease risk.

However, he added, the trend toward specialization would probably be slow. "Specialized hog producers would need more capital and would be likely to form or integrate with separate corporations to acquire it," he said. "Experienced managers, at first, would be hard to find."

Hogs won't necessarily leave the corn belt, according to Mr. Blaich. He said it's more likely that hog farms will concentrate around packing house locations in the Midwest.

Initially, Mr. Blaich said feeder pig sales may increase somewhat. In other words, specialization may go only part way to a temporary split between feeder pig production and growing and fattening. However, he questioned whether seasonal feeder pig production would satisfy markets rapidly changing to year-round production with more emphasis on quality.

Will hog producers be more likely to enter contracts with feed manufacturers in the future? Not necessarily, Mr. Blaich said. He stated that so far, the likeliest candidate for contractual operations is the producer "who has not acquired the latest techniques nor the necessary managerial skills for a successful operation. As a result, he has probably also suffered the problem of capital acquisition."

In such a situation, Mr. Blaich said a feed contract may be quite attractive; it helps the producer make up for deficiencies. However, the economist felt the attraction may be temporary. "In time, these producers learn the essentials of efficient production and their dependence on the feed manufacturer is reduced."

Promotional activities of feed manufacturers are likely to continue to intensify, Mr. Blaich said, at least until the potential market for hog feed is exhausted. He concluded that how fast feed manufacturers spread new technology and aid in financing will influence the rate at which hog production practices change.

Price Supports on Barley Broadened

WASHINGTON—The U.S. Department of Agriculture has broadened the price support eligibility for 1960-crop barley to include grade No. 5 barley or No. 5 garlicky barley.

This action will provide greater price protection to producers for this year's barley crop, which has a high proportion of thin barley due to unfavorable weather conditions, particularly in North and South Dakota.

To determine the loan rate for specific lots, barley grading No. 5 will be discounted 18¢ per bu. below the basic support price for grade No. 2 or better, in addition to other applicable discounts.

Prior to this change, price support on this year's crop had been limited to barley grading No. 4 or No. 4 garlicky.

Minimum test weight permitted under grade standards for No. 5 barley is 36 lb. per bushel. Maximum amount of thin barley permitted is 35% for grade No. 4 and 75% for grade No. 5.

Similar action has been taken previously to extend barley support eligibility to Grade No. 5 on 1957, 1958, and 1959 production.

Better Egg Prices May Bring About Surplus in 1961

KNOXVILLE, TENN.—There are many signs pointing to greater egg production in 1961, and the reason is "the swinging pendulum in agricultural production," according to Eugene Gambill, University of Tennessee associate extension agricultural economist. "In March of this year," Mr. Gambill said, "egg type placements were only about 60% of March, 1959. This is almost certain to bring about lower egg production and higher egg prices in the last half of 1960 and perhaps early 1961.

"From the bleak experience of the past year we shall have moved to the other extreme. From surplus supply, low prices and losses to producers we shall move to low production, high prices and good profits to those able to have weathered stormy periods of the recent past.

"And what about 1961? Will the pendulum swing back to a position of surplus supply? It is very likely that this is what will occur," Mr. Gambill continued. "As agricultural production becomes more specialized and production units more highly capitalized the old problem of price instability appears to be growing more acute and dangerous.

"Yes, farmers will adjust; they will eventually cut back production. They do this because they must and then only after taking serious losses. With a high degree of specialization and large use of capital, much of it in the form of credit, these losses can spell real trouble.

"Rapid changes in volume of production and price are typical of poultry and eggs as well as other farm goods having short production cycles," Mr. Gambill said. "The improved prices and profits of the first half of the year are beginning to stimulate volume and again we are moving back along the well known cycle to larger production and reduced prices and profits."

Oregon Production Of Fryers Soars

SALEM, ORE.—Oregon fryer production during the past three months has soared 16% above that for the same period a year ago, Dal Ferry, newly elected chairman of the Oregon Fryer Commission, announced.

Mr. Ferry cautioned growers and hatcherymen to use discretion lest overproduction in the autumn lead to a disastrous price situation.

Bill Rogers of Springfield, former commission chairman, was elected vice chairman and secretary by the group.

Both Mr. Ferry, former merchandising committee chairman, and Mr. Rogers will hold office until July, 1961. The two men were recently appointed by Gov. Mark Hatfield to three year terms.

Interviews are still being held for a new executive secretary for the commission.

Mr. Ferry also announced that the commission is taking steps toward more rigid enforcement of the Oregon fryer labeling law. Several inspectors have been appointed to travel throughout the state. They will call on retailers, check their labeling practices and report any violations.

Knute Hansen, Portland, head of the processor advisory committee, attended the commission's meeting and reported, "Cooperation between growers and processors in Oregon is stronger today than ever before."

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Omaha Feed Firm's President Retires

OMAHA—T. J. Wurdeman, president and sales manager of Standard Chemical Manufacturing Co., Omaha feed concentrate manufacturer, has resigned to retire, it was reported Aug. 12 by Ben Harrison, board chairman. Mr. Wurdeman had been with the firm for 30 years.

Mr. Harrison is now both chairman and president of the company, and succeeding Mr. Wurdeman as general sales manager is A. L. Konopasek, formerly regional sales manager at Norfolk, Neb. Mr. Konopasek's 12-year career with the company has included state and district sales management posts.

Mr. Harrison announced that a new sales management post has been created. Filling the position of assistant general sales manager is Merle Lumadue, previously sales manager in South Dakota.

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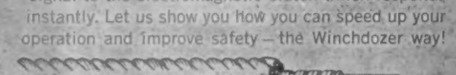

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Increases in Yield Prospects Make Promising Crop Year

WASHINGTON—Upward revisions in yield prospects for several major crops during July give promise of making 1960 the nation's biggest crop year, the U.S. Department of Agriculture says.

Playing a major role in improvement in yield prospects were an easing upward during July of corn prospects and the fact that the winter wheat and oats outyielded earlier expectations. Spring wheat and barley prospects shrank as the major producing states were hot and dry.

The all crop production index edged upward to 119, or 1 point above the record of 1958 and 1959, USDA notes. Food grain and oilseed group indexes are substantially above a year ago to give the major lift to the over-all index and counteract the lower outlook for the heavily weighted feed grain group. The composite yield per acre index covering 28 leading crops edged upward to 138, well below the record of 143 in 1958, but above the 135 of 1959.

Total feed grain tonnage is now expected to fall about 4% below last year, USDA says. Oat production is substantially above last year, but the corn, sorghum and barley crops are expected to be smaller than in 1959. The July weather remained too cool in the eastern Corn Belt to overcome lateness, but the crop still holds promise given normal August moisture and warmth, USDA says.

A 4.1 billion bu. **corn crop** is now in prospect, nearly 1% above the forecast a month ago, but 6% below the record production in 1959. The slight increase from the July forecast is largely due to improved yield prospects in Ohio, Illinois and Iowa, says USDA. The yield per harvested acre at 49.1 bu. is below last year's 51.5 bu. yield, but far above the 41.6 bu. average. Much of the corn was planted late this year, and while the crop made good progress during July, USDA says, development is generally behind normal for Aug. 1. Prospective production in the Corn Belt is 47 million bu. above the July forecast.

Wheat Estimate

Production of all **wheat** is estimated at 1,362 million bu., an increase of 1% over a month ago, a fifth above the 1959 production and nearly a fourth above average.

Oat crop prospects improved slightly during July, prompting USDA to estimate production at 1,167 million bu. on Aug. 1, 2% above the July 1 forecast and 9% above last year's crop.

Production of **soybeans** was estimated at 548 million bu. on Aug. 1, 2% above last year and the second highest of record.

Soybean conditions on Aug. 1 varied widely, ranging from poor to excellent in different states. Much of the crop was planted late but is progressing well.

Barley prospects declined about 4% during July, chiefly because of the hot dry weather in the heavy-producing northern states. A total production of 411 million bu. is now indicated, just 2% below the large 1959 crop.

The **sorghum grain** production forecast of 539 million bu. is 7% below last year and 12% below the record production in 1958. A smaller acreage was planted this year and yield per acre is expected to fall short of last year's record.

Although production of **flaxseed** is estimated at 28 million bu., 25% more than the 1959 production, it is 25% less than average.

Production of **hay** of all kinds this year is forecast at 115.3 million tons, which is 2% more than last year and 5% above average. The August forecast is slightly below the prospects a month ago. Lack of sufficient rain for optimum plant growth in some areas, particularly in lespedeza producing states, contributed primarily to this reduction.

Pasture feed conditions throughout the U.S. on Aug. 1 averaged 82% of normal, 4 percentage points above a year earlier and 5 points more than the 1949-58 average for this time of year. The deterioration in pastures during July was slightly less than the average decline between July 1 and Aug. 1 during the 10-year period, but pasture condition showed marked sectional variation.

California, Arizona Cattle on Feed Up

WASHINGTON — The number of cattle and calves on feed for market in Arizona and California on Aug. 1 was up slightly from July 1 and 16% more than a year earlier, totaling 951,000 head.

California cattle and calves on feed for market made up the brunt of the rise from both July 1 and year ago levels. The total on Aug. 1 in California amounted to 752,000 head, up 2% from the 738,000 head a month ago and up 20% from the 627,000 head on feed Aug. 1 last year. Cattle and calves placed on feed during July totaled 136,000 head, compared with 117,000 head placed last July. Marketings of fed cattle in California during July at 122,000 head compared with 138,000 head in July, 1959.

Meanwhile, the number of cattle and calves on feed for market in Arizona actually was down from July 1, but above a year earlier. The Aug. 1 total was 199,000 head, off 5% from July 1 but 3% ahead of the 193,000 head on feed Aug. 1, 1959. Placements of cattle and calves on feed during July amounted to 24,000 head, compared with 33,000 head placed in July last year. Fed cattle marketed during July are estimated at 34,000 head, up slightly from the 33,000 head marketed during July, 1959.

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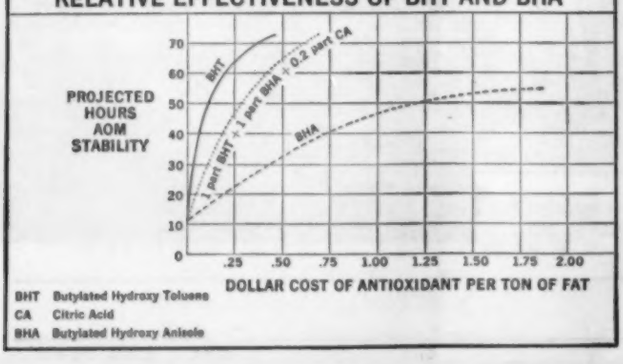

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Division Sales Head Named by Doughboy

NEW RICHMOND, WIS.—Parnell E. Pederson, an employee of Doughboy Industries for 22 years, has been appointed sales manager of the New Richmond division of the company's formula feed division.

P. E. Pederson

Mr. Pederson, whose appointment was made by Laton M. Henderson, vice president of the division, had been a formula feed division salesman since 1945. As a salesman he covered nine counties in western Wisconsin and eastern Minnesota. Now he will be responsible for Minnesota, Wisconsin, northern Illinois, upper Michigan and the Dakotas.

A native of Wisconsin, Mr. Pederson has lived most of his life in New Richmond. He joined Doughboy in 1938 and once worked in the company's feed plant and mill.

During World War II he served as coordinator of all government shipments at Doughboy, including rations packaged for U.S. and Allied armed forces.

Earl C. Corey Guilty In Grain Storage Case

WASHINGTON — Earl C. Corey, former director of the Portland, Ore., office of the Commodity Stabilization Service, has been found guilty of conflict of interest and conspiracy by a federal district court jury.

Mr. Corey was found guilty of doing business on behalf of the government with a firm in which he had an interest and was also convicted on two counts of conspiracy against the government. He faces a possible sentence of 12 years, two for conflict of interest and five each on the other two counts, along with a $22,000 fine.

Mr. Corey's partner in the grain storage firm, Lawrence M. Smith, Waterville, Wash., was found guilty on two counts of conspiracy and eight counts of filing false documents with the government. He faces a possible sentence of five years in prison on each count and fines up to $100,000.

According to sworn testimony, Mr. Corey was assigned a one-third interest in the grain firm and received $83,250 in profits without investing any of his own money. Mr. Smith testified that he had filed applications for the wheat storage contracts and had not named Mr. Corey as a partner.

Marketings of Hogs Dip 31% in Canada

OTTAWA, CANADA—A 31% reduction in hog marketings during July, August and September this year as compared with 1959 is indicated in a quarterly pig survey prepared by the Canada Department of Agriculture. Also forecast is a 27% decrease during the last quarter—the heavy season for hog marketing.

Pulling the Canadian hog market out of its doldrums was the government's decision to change its policy of price support from direct purchase to deficiency payments. The new scheme went into effect Jan. 9 this year and improved conditions have followed in its wake.

While the direct purchase support plan was in effect, hog production rose from 6,458,000 in 1958 to 8,560,000 last year—highest peacetime production on record. Only in 1944, at the height of the nation's wartime effort, did producers raise more hogs. In that year, Canada marketed 8,860,000.

The cut-back in production has improved the market picture. Domestic disappearance and a small, steady export trade actually call for more than is being produced and this has allowed industry and the Agricultural Stabilization Board to reduce their stock of pork products.

The quarterly pig survey, based on a dominion bureau of statistics survey brought out in June, looks for average weekly marketings of 106,000 hogs in July, August and September. In July and August last year, the average was 143,000. Also predicted is that in the final quarter, weekly marketings will average 121,500, compared with 167,000 for the same period a year ago. And, projecting current market figures, the survey suggests a 16% decrease in the first six months of 1961 over the first half of this year. This would average out to 121,300 hogs a week.

100 x 100 = 10,030 FOR BROILER RAISER

SANDY HOOK, VA. — Durwood Siddons sold a batch of broilers recently that totaled more birds than the number of baby chicks he bought to start with. E. C. Truett, county agent, explained it this way: Every hatchery gives the purchaser a few extra baby chicks with every 100 he orders. But losses still usually cut most growers' total of finished birds below the 100 level. Mr. Siddons' score: 10,000 baby chicks bought; 10,030 broilers sold.

An improved market picture has been accompanied by higher prices to producers. Grade A hogs at Montreal in July, 1959, averaged $25.41. In July this year they averaged $28.36. At Saskatoon the comparable figures were $21.50 for July, 1959, and $23.93 for July, 1960.

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Cost Study–Part 3

Causes of Variation in Costs of Manufacturing And Distributing Feeds

By Dr. Richard Phillips
Iowa State University

EDITOR'S NOTE: This is the final article in a series of three based on research by Dr. Richard Phillips, agricultural economist at Iowa State University, which led to Marketing Research Report No. 388, "Costs of Procuring, Manufacturing and Distributing Mixed Feeds in the Midwest." The report was published in April by the U.S. Department of Agriculture.

The primary purpose of the research study by the U.S. Department of Agriculture and Iowa State University was to compare the four systems of manufacturing and distributing feeds (premix, concentrate, complete feed and retailer-manufacturer). The two previous articles in this series have discussed the results in terms of the reasons for them and their implications for present and probable trends in the mixed feeds industry.

The comparison of the four systems has been based on standardized costs representative of average conditions and efficiency for each of the four systems. But as one would expect, the research revealed more differences in costs within each of four systems than the average differences found to exist between them. The purpose of this third article is to review the differences in cost among the plants studied, and some of the basic reasons for these differences.

The first line of the accompanying table shows the average total per ton cost (without ingredients) for the plants studied, together with the figure for the high cost plant and for the low cost plant. Because the cost figures for the premix manufacturers are not directly comparable, they are excluded from the figures shown in this table.

Variations in Production Cost

The total cost for production, warehousing, handling and other plant operations varied from $6.22 ton to $19.92 ton among the manufacturers studied. As has been shown by other studies, much of this difference can be explained by differences in size of plant and the degree to which the full plant capacity is being utilized. But other factors affect production costs also.

No measure of actual plant capacity was obtained in this study, so that it was impossible to isolate the net effect of capacity utilization on per ton production costs. But the study did show four factors which have a major influence on production costs. These are:

(1) Annual tonnage manufactured.

(2) Size of other operations integrated with the feed milling.

(3) Per cent of total production which is pelleted.

(4) The percent of total volume sold in bulk.

The reason increased tonnage decreases total production costs is that costs like depreciation and supervisors' salaries increase very little with increased volume. So the more tons over which these costs are spread, the lower the total cost per ton. Beyond a volume of 20,000 tons per year, **production costs decreased 3.36¢ ton with each 1,000-ton increase in volume in the plants studied.**

The size of other operations integrated with feed milling (soybean processing, terminal elevator operations, etc.) affect per ton feed production costs by distributing some of the fixed costs to these other operations. This factor was measured in the study by the percentage of total plant sales represented by feed sales. The smaller this percentage, the larger the other operations integrated with feed manufacture. **The total feed production cost was found to decrease by 3¢ ton for each 1% decrease in the percentage of total sales represented by the feed division.**

As one would expect because of the added costs of pelleting, production costs were found to increase as the percentage of total output pelleted was increased. **Total feed production costs increased 0.8¢ ton with each 1% increase in the percentage of total volume pelleted.**

Producing and selling feed in bulk rather than in bags decreased total per ton production costs in the plants studied. This saves bags and bagging costs and permits somewhat lower plant handling costs as well. **Total feed production cost was found to decrease 30¢ ton with each 1% increase in the percentage of total output handled in bulk.**

Variations in Sales Cost

Some relation was found between annual volume and total per ton cost for sales and advertising. Apparently manufacturers with sales of over 40,000 tons are able to organize a sales force and sales program a little more efficiently than smaller manufacturers.

But the major factor determining the manufacturer's total per ton sales cost is the sales philosophy of the manufacturer. At one extreme are those who operate on relatively wide margins and concentrate on sales programs and customer services. At the other extreme are those who use price to sell feed and spend a minimum for sales efforts and customer services. Most manufacturers fall somewhere along the continuum between these two extremes.

This study did not attempt to determine which of the two philosophies is the most successful. An operations research study of one of the plants did indicate that if additional salesmen could be hired for $5 an hour of actual field contacts, each hour they worked would be worth $20.20 in additional profits to the company.

Variations in Transportation Cost

Total costs of transporting the feeds varied from $2 ton to $4.20 ton among the plants studied. **This per ton transportation cost was directly related to the volume-distance distribution pattern from the mill.** The greater the volume sold relatively close to the mill, the lower the manufacturer's per ton transportation cost. This is a major reason why manufacturers have an incentive to decentralize their milling operation and locate mills close to their outlets.

The relationship found to exist in the plants studied was that **total per ton transportation costs amount to $1.61 plus 2.4¢ for each mile of average haul.**

No significant differences in feed transportation costs were found to exist between manufacturers who deliver primarily by truck and those who deliver primarily by rail. None of the plants studied delivered any quantity of feed by water, so the possible influence of water transportation could not be examined.

Variations in Overhead Costs

The overhead cost figures in the accompanying table include research costs of about 30¢ ton and ingredient procurement costs of about 19¢ ton of feed sold. These two classes of costs are such a small part of the total costs of manufacturing and distributing feeds that they were not examined separately.

The total overhead cost per ton depends largely upon the total annual volume over which the overhead can be spread. **The volume found to affect per ton overhead cost includes not only (1) annual feed production, but also (2) tons of feed ingredients merchandised and (3) volume of sales from other operations integrated with the feed division.**

The net effect of each of these three kinds of volume was isolated for the plants studied. **Total overhead cost was found to decrease 4.2¢ ton with each 1,000-ton increase in feed manufactured.**

Another kind of volume in the feed division of the manufacturers studied was the tons of feed ingredients merchandised as such. This volume was able to support a part of the total overhead charged to the feed division. **The total overhead cost per ton of feed manufactured was found to decrease 23¢ with each 1,000-ton increase in the volume of feed ingredients merchandised.**

As has been pointed out in connection with production cost, the size of other operations integrated with the feed division was measured by the percentage of total plant sales represented by feed sales. **The total overhead cost of feed manufacturing was found to increase by 2.9¢ ton with each 1% increase in percentage of total plant sales represented by the feed division.**

Variations in Ingredient Cost

The average ingredient cost varied from $58.36 ton to $72.78 ton among the plants studied. A large part of this variation can be explained by the makeup of the ingredients purchased. But the plants studied were found to have varying ingredient costs for identical ingredients, even after seasonal price fluctuations were taken into account.

The analysis of the variations in per ton ingredient costs revealed that these variations were not associated with whether the ingredients were received by truck or by rail. Neither were they directly associated with the annual volume of feed produced. **Differences in the delivered price of**

Average High and Low per Ton Costs for the Manufacturers Studied

Class of Cost	Average for All Plants	High Cost Plant	Low Cost Plant
Total cost without ingredients	$22.66	$33.08	$12.73
Production cost	10.02	19.92	6.22
Sales cost	5.17	9.22	.78
Transportation cost	3.00	4.20	2.00
Overhead cost	4.47	8.44	.33
Ingredient cost	66.21	72.78	58.36
Total cost with ingredients	$88.87	$100.88	$71.09

ingredients were associated with (1) the distance shipped, (2) the average size of order placed for the ingredients and (3) the percentage of total purchases of the ingredient which was received in bulk.

Average per ton costs for major ingredients increased as the distance from the source of the ingredient to the feed plant increased. The amount of the increase varied among ingredients, and was highest for ingredients normally obtained from nearby sources. For most ingredients the difference reflected the full freight cost, and for some also reflected a "shopping" advantage of being close to the ingredient supply.

Manufacturers able to place individual orders for ingredients in large quantities were able to get them quite a lot cheaper than those who were forced to order in small quantities. Trucklot orders were cheaper than less-than-trucklot orders. But carlot orders were cheaper than trucklot orders. The size of order made more difference in the price for some ingredients than for others.

Bulk purchases of major ingredients like soybean meal and linseed meal cost the manufacturers substantially less than purchases of these same ingredients in bags. For most of the manufacturers, the price difference between bulk and bagged purchases amounted to $6 ton or better. And this advantage was over and above price advantages received by placing larger orders.

Variations in Total Cost

The total cost of manufacturing and distributing mixed feeds (including ingredients) varied from $71.09 to $100.88 ton. While some of this variation was due to management and other factors which are difficult to measure, a large part of it was due to the factors which have been discussed here.

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EGGSHELL BRAND Oyster Shell rings up the dealer's cash register so often because it's tops in the field for digestibility, palatability and economy.
Hens prefer soft roof EGGSHELL BRAND over calcium substitutes. That's why poultrymen prefer it.

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Has belted construction for easier access to working parts. Saves you time and money when maintenance is required.

It's no secret why—over the years—the Kelly Duplex Vertical Feed Mixer has been such a favorite with feed mill and elevator operators all over the country.

The Kelly Duplex is unconditionally guaranteed to mix more feed with the same power than any other machine on the market—and to produce a mixture so evenly and thoroughly blended that it will stand the most rigid inspection. A complete batch can be loaded, mixed and sacked in less than fifteen minutes.

Constructed of heavy, arc welded steel—the Kelly Duplex completely eliminates feed loss, is practically noiseless in operation, and is so liberally rated that owner after owner reports it will hold up to twice its stated capacity.

Now, with a new motor mount, a new inspection door, a new bagger, and a new hopper bottom and bearing housing—the Kelly Duplex Vertical Feed Mixer is 4 ways better than ever before—and, more than ever before, is your one best mixer buy.

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Springfield, Ohio

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- ☐ Pitless Corn Sheller
- ☐ Regular Corn Sheller
- ☐ Magnetic Separator
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- ☐ Bucket Elevator
- ☐ Chain Drag
- ☐ Twin Molasses Mixer
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MANUFACTURERS OF QUALITY MILLING EQUIPMENT SINCE 1930

NEW NUTRENANS—Former employees of the A. E. Staley Co. feed operations purchased by Nutrena Feeds gathered in Minneapolis recently for orientation in company sales, service research and employee policies. Henry Patton, Nutrena sales training director, supervised the six-day meet during which the 22-man group met company executives and product specialists and toured the firm's general office, central research building and 820-acre research farm at Elk River, Minn.

The group includes (sitting, left to right): T. L. Mitchell, Decatur, Ill.; O. A. Boyst, Princeton, W. Va.; R. O. Caltrider, Columbia, S.C.; C. F. Anderson, Ohio, Ill.; L. U. Juravic, Country Club Hills, Ill.; C. F. Hicks, Minneapolis; H. C. Trinkle, Macomb, Ill.; Jim Hawk, Monmouth, Ill., and D. B. Calhoun, Dixon, Ill. Standing (left to right) are: O. P. Spindler, Newburgh, Ind.; R. R. Bloomer, Elsie, Mich.; H. Bruniga, Decatur, Ill.; R. W. Ransom, Danville, Ind.; W. T. Cadick, Grandview, Ind.; H. J. Weimer, Greensburg, Ind.; J. J. Callan, Ripon, Wis.; J. M. Murphy, South Bend, Ind; H. R. Richardson, Decatur, Ill.; F. M. Brandenburg, Wausau, Wis.; Don Wilkey, Decatur, Ill.; F. R. Wicht, Grand Rapids, Mich., and Guy LeFever, Rockford, Ill.

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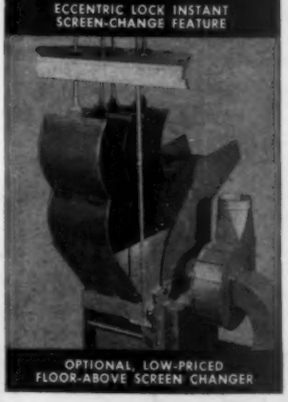

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CUTS GRINDING COSTS: Patented eccentric lock enables instant change of ¼" thick screens while mill is running. No extra power consumed by starting and stopping. Exclusive 10-edge adjustable hammers last longer.

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Further proof of how GLYCAMIDE *can pay off in increased profits* comes from the production files of one of the leading feed manufacturers in this country. These records show that 2,500,000 broilers on rations containing GLYCAMIDE weighed an average of 3.53 lb. at 9½ to 10 weeks of age, with a feed conversion of 2.34. And, within this group, 300,000 birds averaged 3.83 lb....*with a point spread of 149.*

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Feed Firms Provide Special Rooms for Meetings

By Al P. Nelson
Feedstuffs Special Writer

Throughout the feed industry across the nation, one will find that more and more feed firms are providing special meeting rooms—often in basements of feed mill office buildings—where they can hold employee and other staff meetings and where farm groups can hold meetings free of charge.

With many new feed mills being built today, one finds trim, one story office and farm supply store buildings near the mill. At the separate office buildings, there is usually a large modern scale for grain and feed weighing, and executive offices, restrooms, and space for displaying and selling farm supplies. Also, there will usually be a wide stairway going down into a roomy, well-lighted basement.

In this basement is the firm's oil or gas fired heating plant and also tables and chairs for meetings. Rooms like this may be 30 by 40 feet or more and they will seat from 25 to 70 people for a farm or other type meeting. Most of the areas will have some kitchen facilities for serving coffee, etc. There may sometimes be a blackboard or two for chart talks. Sometimes there is a screen and movie projector.

Farmers Like Them

Farm groups are taking to these new free farm meeting rooms made available for them by alert feed and grain men. In some instances these rooms are booked weeks ahead, which indicates how satisfactory they are as meeting halls. The FFA, 4-H, Grange and other farm groups apply for meeting space. Sometimes the Boy Scouts, Girl Scouts and other groups ask for the use of the meeting room. In one case when a lady dance teacher could find no suitable place for a dancing class to meet, she asked the feed dealer if she could use his community room. She was granted the use of the room on a regular basis for her dancing class.

One of the largest and best equipped rooms of this type is that of the D. E. Horn & Co., Inc., York, Pa., in an office and farm supplies building separate from the mill. There's a wide stairway which leads downstairs to the basement room and there is a coffee urn where the visitor can help himself to a cup of coffee.

The Horn meeting hall is used extensively by farm groups, the management reports. There is a movie projector and screen available for groups which reserve it. In this room, too, the Horn firm has feed educational signs which fit well into the place. Persons who come here for meetings can't help noticing and reading this firm's signs.

Another Example

Another outstanding basement meeting room is that of the Maynard (Iowa) Cooperative. Here, too, it is located in an office and farm supplies building separate from the mill and elevator. The room is in almost constant use by farm and other groups, states Don Hartz, manager. No charge is made for the use of the room, he states, and the firm will also furnish free coffee for the groups that meet there. "A pound of coffee goes a long way," says Mr. Hartz, "and it is mighty inexpensive advertising."

Mr. Hartz also points out that such a basement room can often be put to use during the daytime for meetings as well as for detailed office or sales-work.

"When you want to talk to a customer privately, to discuss his feeding program, etc., you can take him down to this basement room, give him some hot coffee and sit there at a table and talk without interruption," says Mr. Hartz. "In fact, our basement room is used like this every day. Most of the group meetings are held at night."

St. Ansgar Grain & Feed Co., St. Ansgar, Iowa, managed by Claire Brasch, has a basement meeting room in a new office and farm supplies building facing the main street of that community. Mr. Brasch states that the room is in constant use by farm and civic groups.

"When farm groups hold meetings here, we often have a chance to meet farmers who are not customers," says Mr. Brasch. "They get used to coming to our place of business and sooner or later they may stop in and buy from us when they are in town. We think that there is the lack of a comfortable meeting place for small farm groups in many communities, and that grain and feed dealers can often fill this need."

Some grain and feed establishments have separate outside entrances to their meeting rooms. Others grant the use of a key to responsible persons in farm groups for the night of the farm meeting. Other mills have an employee from a night shift check on the meeting as to opening and closing time. In still other cases, the feed mill owner himself may come in for evening office work while a meeting is in session.

"A meeting room like this is a natural place to hold separate meetings on various nights for cattle, hog, dairy and poultry feeders," said one feed man. "You can turn on the coffee urn and have the coffee ready by the time the meeting needs a break. This is better than having such meetings in a retail salesroom where you usually have to set up chairs and push aside some merchandise displays. And the basement meeting room can always be cleaned up by some employee in the morning with-

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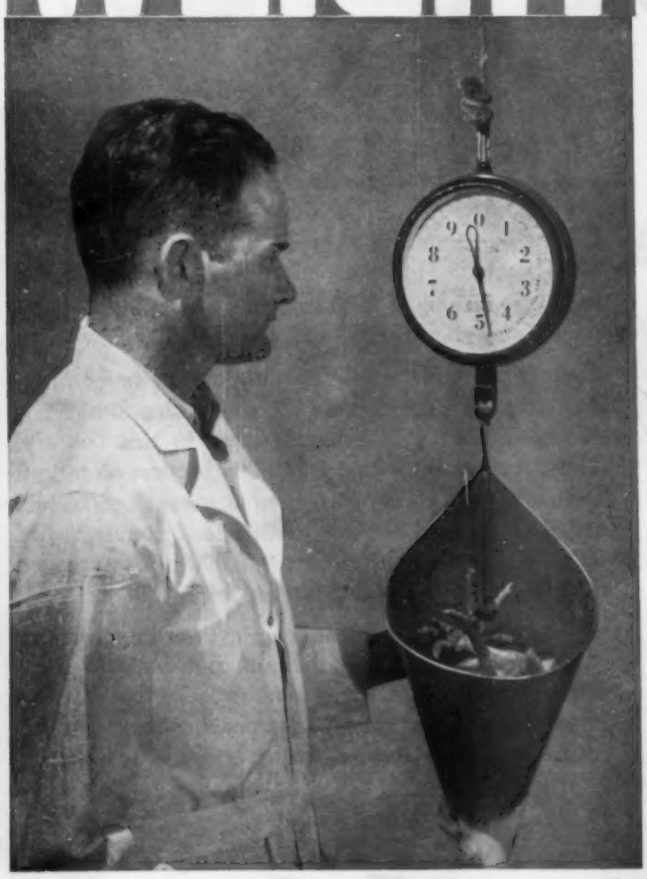

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No breeding plateau here! We work continually with promising crosses to find new ways to improve the *three* basic lines which produce your Peterson Males. Then we put our breeders to the final test . . . we select them on their performance in the laying house and on the performance of their offspring *under commercial conditions right on our own farms.*

We *know* what our birds can do. We're not only putting more weight on the Peterson Male, we're putting more weight on millions of broilers — wherever broiler men and processors have discovered the advantages of a Peterson Cross. Better see that your broilers are sired by this year's Peterson Male . . . it's the best breeder cockerel we ever produced.

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out disturbing the upstairs business flow."

There is also a psychological difference in holding a meeting in a basement room rather than upstairs in a farm supplies store. When the farmer sits in a store listening to a discussion on feeds, he may become hostile, always waiting for the sales pitch. He can see so much merchandise he feels he's going to be sold something at the opportune moment.

Informal Atmosphere

There's a disarming informality, however, in a basement meeting hall that makes the farmer feel quite at ease, the feed mill managers state. Except for a few signs posted about, there is no visible sales pitch. The farmer can concentrate on what is being said about feeding, or on the movie being shown without waiting for the sales pitch. The sales pitch does come later, but usually the farmer is not hostile toward it, say some feed men, for he has absorbed the sales message.

Warren Crandall, manager of Farmers Elevator Co., George, Iowa, states that his firm's meeting room in the basement of an office building, is used regularly by farm groups.

"It's a service they appreciate," he says, "for usually there is no other small meeting room which is available to them without charge. We figure this room is a good investment for us. Actually we'd have to have the space anyway for boiler and restrooms. The addition of some chairs and tables makes it a meeting room that meets the requirements of practically all average farm groups."

Wieston Grain Co., Manson, Iowa, also has a basement meeting room in a new office and farm supply building. This spring when the firm staged Wayne Dividend Days, the management used the room for serving ham sandwiches and coffee to customers. Several hundred customers came in for the lunch and remained to buy feed or farm supplies on the way out. The Wieston basement meeting room is also available for farm group gatherings.

Sales Training

The Russells Co., Hilliard, Ohio, uses a large first floor room in its farm store for sales training, feeder education and other meetings. Customers need to walk through the farm supply display to get to the meeting room. This had not been planned, but it has proved to be an excellent sales promotion idea, the management reports.

So, perhaps every dealer, custom mill operator and feed manufacturer will find it worthwhile to check his community for meeting hall space. There may be an opportunity to establish one right on the feed mill premises.

FARM EDITOR DIES

CEDAR RAPIDS, IOWA — J. S. (Jim) Russell, farm editor for the Des Moines Register and Tribune for 35 years, was killed in a traffic accident near here Aug. 4. Mr. Russell's car struck the rear of a truck as he was enroute to DeKalb, Ill., to attend an agricultural field day. The only farm editor the Register and Tribune ever had, he was a member of the American Agriculture Assn. and the Agriculture Committee of the U.S. Chamber of Commerce.

Report Earnings of Grain Mill Workers

SAN FRANCISCO — Production workers in grain mill processing firms earned an average of $110.08 per week during June, compared with $104.81 in May and $101.11 during June of last year, reports the division of labor statistics and research of the California State Department of Industrial Relations.

The average hourly earnings were $2.59 in June, $2.55 in May and $2.46 the previous June. The length of the work week was 42.5 hours, 41.1 hours and 41.1 hours respectively, according to the report.

$65,000 PROJECT

LAURENS, IOWA—Willis Godfrey, elevator manager of the Farmers Cooperative Elevator Co. here, has announced that work is to start at once on a $65,000 project: 28 new bins with a capacity of 312 tons.

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Screw Conveyor Systems
INCREASE EFFICIENCY and EFFECT SAVINGS IN POWER AND MAINTENANCE!
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ARID-AIRE
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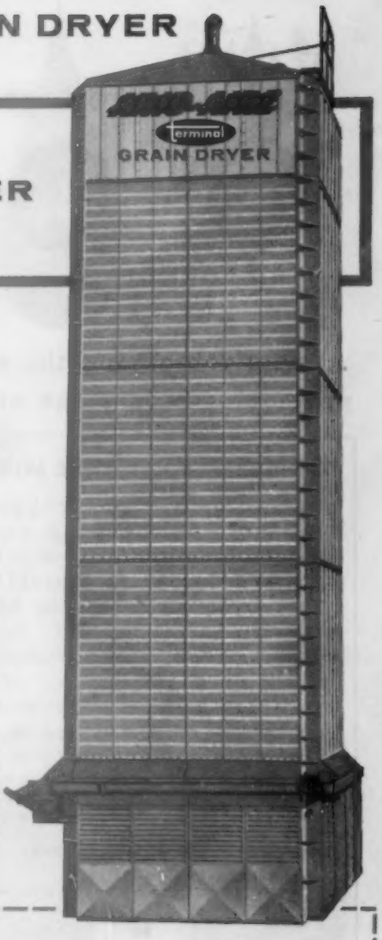

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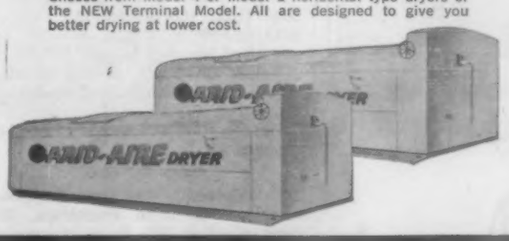

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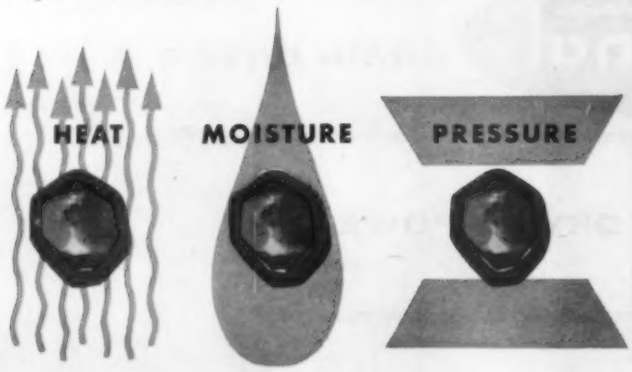

...thus preserving the growth-giving, health-protecting properties of the penicillin.

ARNOLDIZATION TESTS PROVE ANTIBIOTIC STABILITY OF MICRO-PEN

Micro-Pen and four other brands of penicillin products were mixed into five batches of a commercial-type broiler ration at the level of one grain of procaine penicillin activity per pound. Three samples from each batch of feed were given the Arnoldization test. Each sample was placed in a closed, preheated cabinet and subjected to live steam at a temperature of approximately 100° C. for five minutes. The average activity-retention qualities of the three samples are contained in the chart below.

	MICRO-PEN	PENICILLIN A	PENICILLIN B	PENICILLIN C	PENICILLIN D
Average range of particle sizes (in microns)	75-100	30-40	200-300	30-40	200-300
Percent retention of stability after Arnoldization (simulated pelleting)	85	61	79	59	76

Micro-Pen is stable... protects penicillin activity

For more research information, write... ELANCO

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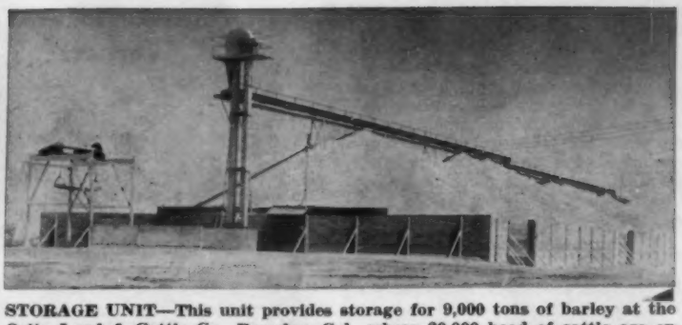

STORAGE UNIT—This unit provides storage for 9,000 tons of barley at the Orita Land & Cattle Co., Brawley, Cal., where 20,000 head of cattle are on feed.

Trend to High Grain Feeding Ups California Barley, Milo Demand

By Special Correspondent

BRAWLEY, CAL. — The trend to high grain feeding of beef cattle has caused an increased demand for barley and milo throughout the Imperial Valley.

Several years ago, feeders utilized alfalfa and other native crops and used the higher grain rations only when cattle were getting their last few weeks of finish. Now, however, most feedlots shift the animals rather quickly to high energy feeds which are composed mostly of barley and maize.

At the Orita Land & Cattle Co., which normally has from 18,000 to 20,000 head of cattle on feed, the usage of grain has been greatly increased.

"We have been using these high energy feeds only about a year," said Glenn Deen, cattle foreman. "Our best ration has 82% concentrates, which is equally divided between barley and milo.

"Most everyone down here operates about the same way. Some lots are using 75% grain, but I don't know of anyone, except a few farm feeders, who are using less. We are getting better grains from grain feeding, and it enables us to use lighter weight calves for a quicker turn-over."

Huge Storage Unit

In order to keep an ample supply of grain, the company has a huge storage unit which holds over 9,000 tons of barley. The open structure has 9-ft. walls made of 8-in. concrete tile made 16 in. thick. The walls are braced on the outside by railroad rails and iron pipe, which are slanted from the wall to the ground and set in concrete.

The storage bin is 100 ft. wide and 320 ft. long and holds enough barley for a 66-day feeding period. It enables the company to buy barley in season at a somewhat lower price than normally.

Several other feedlots are contemplating the construction of large storage units. Cattle feeding is still increasing in the Imperial Valley, which is one of the larger feedlot centers in the world. A 1958 poll showed that 350,000 cattle were fed during the year, and the number will be slightly higher for 1960.

Dow's Ag Chemical Sales Increase 10%

MIDLAND, MICH.—A 10% increase in sales of agricultural chemicals for the fiscal year ended May 31 has been reported by Dow Chemical Co.

This was accomplished "although adverse spring weather was a deterrent to sales as, probably to some extent, was public anxiety over possible chemical residues in food products," Dow officials said.

"The increase results from an improved product line and a strengthened retail dealer organization due to intensive marketing programs at the local level," they added.

At the same time, Dow reported new highs in sales, net earnings and earnings per share for the entire company.

Dow reported sales of $781,433,740 and net earnings after taxes of $82,404,342 or $3.01 per share for the fiscal year.

The sales increase was 11% over the preceding yar, the net up 31% and earnings per share up 26% on the 27,362,631 shares outstanding. Shares outstanding increased by 4% from 26,357,090 in 1959.

Dow paid $68,317,000 in U.S. and foreign income taxes, an increase of 28% from the preceding year and $218,100,000 in wages, salaries and employee benefits. It paid $36,609,599 in cash dividends to stockholders, plus a 2% stock dividend during the year.

Depreciation and amortization dropped 5% to $17,405,260.

Sales Revenue

Sales revenue was derived approximately 51% from chemicals, 36% from plastics, 7% from magnesium and 6% from agricultural chemicals. Out of each sales dollar, 41.2¢ went for raw materials and supplies, 27.4¢ for manpower costs, 9.9¢ for depreciation, 11.1¢ for taxes, 4.6¢ for cash dividends and 5.8¢ was reinvested in the business.

"Probably the most interesting new product development in the agricultural chemical line," Dow officials say, "was the introduction on the U.S. market of a new coccidiostat, Zoalene. This product, which has certain qualities superior to previous materials, is being sold to the broiler trade in a special formulation under the name Zoamix. Introduced to the domestic market near year end, it should account for significant sales in the current fiscal year."

Construction is nearing completion on a new agricultural research center at Midland which will bring together various agricultural research and development groups "for greater overall effectiveness," Dow reports.

Peterson Alfalfa Co. In Business in Ohio

SYLVANIA, OHIO — Peterson Alfalfa Co. is back in business in Sylvania handling procurement and sales of all alfalfa products. The firm formerly was in business in Omaha, Neb., until 1958.

C. F. Peterson heads the company and Mrs. Bernice Peterson is clerk.

Mr. Peterson has been in the feed business since 1927. During these years, he has been associated with General Mills, Inc., The Pillsbury Co., Nutrena Mills, Inc., Donovan Feed Co., Omaha, and Consolidated Blenders, Inc., Fremont, Neb.

FEED FIRM INCORPORATES

STERLING, COLO. — Lebsack's Feed & Seed, Inc., has filed articles of incorporation listing $125,000 capitalization to conduct and carry on a feed and seed business, including the processing and sale of feed, seed, fertilizer and agricultural products. Incorporators and directors include Clarence A., Esther F. and Lyle Lebsack.

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Facilities Shown, Research Reported at Ohio Swine Day

By DR. H. S. TEAGUE
Ohio State University

WOOSTER, OHIO—The 1960 Ohio Swine Day was held at the W. L. Robison Swine Research Center, Ohio Agricultural Experiment Station Aug. 19. The event is sponsored each year by the experiment station in cooperation with the Ohio Swine Growers' Council and the agricultural extension service.

The forenoon program consisted of tours of the research facilities, educational exhibits and demonstrations. Research trials which were in progress included: (1) The intermittent feeding of an antibiotic to growing-finishing pigs; (2) the effect on performance of moving and resorting pigs; (3) alteration of boar performance by hormonal treatment; (4) gilts being used in a generation study to determine the role of supplemental vitamins in a legume-free dry lot ration, and (5) a trial to determine the vitamin B_{12} requirement of pigs fed on pasture.

Interest was shown in a demonstration of equipment and methods used in obtaining and raising pigs free from certain pathogenic diseases. Plans for swine housing and equipment were exhibited and discussed by members of the agricultural engineering department. Because of the misunderstanding which exists regarding how various pig carcass measurements are taken, the proper methods were demonstrated together with the variations encountered. Experiment station and university staff members also were present to discuss: Factors affecting the price of feeder pigs and the influence of origin and shrink and research dealing with the artificial insemination of swine and research and swine facilities at the newly-acquired western substation, South Charleston, Ohio.

Afternoon Program

An interesting and informative afternoon program was begun with a welcoming address by Dr. Roy Kottman, newly-appointed dean of the College of Agriculture and Home Economics, Ohio State University, and director of the experiment station. Prof. D. G. Jedele, University of Illinois, discussed building and equipment plans for the confinement feeding of hogs emphasizing some of the newer methods being used for disposal of manure.

Also featured was a talk by James D. Caldwell of the University of Nebraska showing the methods used by the Nebraska workers for obtaining "specific pathogen-free" pigs and what has been learned from field experience with pigs obtained in this manner.

The remainder of the program consisted of a panel made up of swine producers, veterinarians and the two speakers to answer questions and further discuss problems encountered in confinement feeding and the "disease-free" pig program.

A ladies' program in the afternoon was held at the main campus at Wooster with a tour of the perennial flower gardens and a demonstration of the newest methods used in home freezing by Pauline Gruner, nutrition extension specialist.

Progress Summaries

Each year progress reports are prepared summarizing results obtained in the swine research program. Following is a brief summary of the reports presented:

VITAMIN SUPPLEMENTATION OF A LEGUME-FREE RATION FOR GILTS IN DRY LOT—A legume-free ration adequately supplied with the vitamins known to be furnished by alfalfa had previously been shown to support good reproductive performance in gilts through a single breeding, gestation and lactation period. Also, it had been observed that there was little or no effect on performance by the exclusion of fat soluble vitamin supplementation from the legume-free ration when it was fed for a period of 30 days prior to breeding through the 25th day of gestation. Two additional trials were conducted in which the feeding period prior to breeding and into the gestation period was extended.

In both trials, ration treatments consisted of feeding either the complete legume-free ration with supplemental vitamins added, the legume-free ration supplemented with B-vitamins only (no vitamins A, D or E

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NEW PROGRAM—As part of a new educational program designed to make farmers better acquainted with today's scientific feeding of poultry and livestock, the Formula Feed Division of Doughboy Industries has started a new system of presenting complete rations on cards carried in racks at dealers' places of business, as shown above. Explaining the system of passing this information on to farmers is Robert Ahlin (right), director of nutrition and research for Doughboy. With him are (left to right): A. J. Bourne, Colby, Wis.; Roland Johnson, New Prague, Minn., and Herbert W. Theis, Ames, Iowa, all salesmen in the feed division. The rack and cards were displayed at the company's recent sales meeting at the River's Edge near New Richmond, Wis.

added) or the legume-free ration with no vitamin supplementation. Twenty-four gilts on each treatment were fed the experimental rations for a period of 60 days prior to breeding and slaughtered 55 to 58 days after breeding. Information was obtained on performance by examination of the reproductive organs. In the second trial, a fourth group of 12 gilts was fed the legume-free ration without vitamin supplementation and permitted to continue through farrowing and lactation.

It was observed that breeding performance was poorer in the spring and summer trial in the absence of vitamin supplementation, but similar breeding problems were not encountered in the second trial initiated in the fall. Poorer performance was manifested by a higher incidence of returns to estrous and the failure of gilts to cycle normally. In a third trial in progress, breeding performance was again normal in gilts fed the unsupplemented legume-free ration.

From information obtained at slaughter, the number of corpora lutea (ovulation rate) did not appear to be affected by ration treatment, nor were there any consistent differences in the average number of live or dead fetuses at mid-gestation.

The 12 gilts fed the legume-free ration without vitamin supplementation farrowed litters of from 3 to 14 live pigs (9.2 average), with an average birthweight of 3.03 lb. Between the 5th and 10th day of age some or all of the pigs in five litters developed an exudative dermatitis. The entire surface of the body was usually affected, and, in most instances, the pigs died within two weeks after the first symptoms appeared. Except for its association with ration treatment, no diagnosis or cause of the condition was determined.

PALATABILITY OF INGREDIENTS IN EARLY CREEP FEEDS AND THE EFFECT OF PELLETING ON CONSUMPTION — Further observations were made on the influence of certain ingredients when added singly or in combination to a simplified early creep feed. Also, the rate of consumption was compared in meal or pelleted form. The basal early creep feed to which ingredients were added consisted of 66% rolled oats, 33.1% cracked shelled corn, 0.4% trace mineralized salt and an antibiotic supplement (0.5%) to supply 100 gm. of Aureomycin per ton.

The feeds were offered to groups of sow or gilt litters from the 14th to 35th day of age. Ingredients tested for their effect on palatability were: Dried fish solubles, lard, a 10-1 mixture of Sucaryl and saccharine, cane sugar and combinations of these ingredients.

It appeared that the inclusion of lard and dried fish solubles (in combination) increased the acceptability of the creep feed. This was in contrast to no apparent improvement from the addition of either ingredient singly. Average consumption was also increased by the addition of a mixture of Sucaryl and saccharine, but not when the two sweetening agents were added in combination with lard and dried fish solubles. The Sucaryl-saccharine mixture at a rate of 1 lb./ton of feed appeared to be superior to the substitution of 10% cane sugar.

More of the creep feed was eaten as pellets than as meal and pigs in sow litters ate more creep feed than pigs farrowed by gilts.

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consumption of early creep feed an apparent improvement in palatability resulted from expansion of the entire feed. Further comparisons were made using the expanded early creep feed, a pig starter and a growing-finishing ration.

Consumption of early creep feed was variable, but it appeared the expanded feed either in ground or ground and pelleted form was not as palatable as the meal form of the basal feed. Also, in a single trial, 3-week weaned pigs ate less of the expanded feed and pigs in these lots made slower and less efficient gains than those fed the same feed as meal. In a 48-day growing-finishing trial an expanded complete ration again seemed to be less palatable and resulted in poorer performance than where the same ration was offered in meal form.

It should be emphasized that the results of these trials are only preliminary. Evaluation of feeds of different formulation or where only the grain portion of the ration is expanded seems worthy of further investigation.

PELLETING OF A COMPLETE RATION OR PROTEIN SUPPLEMENT FOR SWINE — In earlier trials, it was shown that the feeding of a complete ration in meal or pelleted form produced more rapid but less economical gains than when a protein supplement in meal or pelleted form was fed free-choice with corn. Furthermore, the pelleting of both the complete ration or protein supplement resulted in a somewhat lower feed cost per cwt. of gain.

In recent trials, the effect on pig performance and feed cost of pelleting a complete growing-finishing ration or a protein supplement was again observed and in a third comparison the pelleted protein supplement was mixed with shelled corn at a predetermined rate. The feeding of pigs weaned at six weeks a complete pelleted ration or a pelleted protein supplement and corn free-choice was also observed.

Results showed that pigs fed the pelleted form of the complete ration made more rapid and efficient gains than those fed the same ration in meal form. Assessing a charge of $3 ton for pelleting, the increase in efficiency more than offset the cost of pelleting. Pelleting of the protein supplement appeared to have little effect on pig performance in either trial. Pigs fed shelled corn and supplement free-choice when weaned at six weeks gained at a rate of 1.41 lb. per day compared to 1.48 lb. per day when the complete mixed ration was fed. Pigs fed in a similar manner weaned at eight weeks made average daily gains of 1.47 and 1.50 lb., respectively.

Feed cost was again lowest for the pigs which received shelled corn and supplement free-choice (63¢ cwt. of gain when meals were fed and 43¢ when the ration or supplement was pelleted). Gains were not more efficient by this method of feeding so that the lower cost resulted from either the consumption of a ration lower in protein than where complete rations were fed or this and the added cost of grinding and mixing corn into the complete ration.

The average performance of pigs self-fed a ration composed of a mixture of the pelleted protein supplement and shelled corn was similar to that of pigs fed the pelleted supplement free-choice with shelled corn.

MOVEMENT FROM ONE PEN TO ANOTHER OR RESORTING OF PIGS DURING THE GROWING-FINISHING PERIOD—A study was undertaken to measure the effect on performance of moving groups of growing-finishing pigs from one pen to another every 28 days or the systematic resorting of pigs throughout the growing-finishing period. No attempt was made to clean the pens when the pigs were moved or sorted or to interfere with the normal fighting between animals which occurs after regrouping.

The results of the first trial indicate that either moving or resorting every 28 days decreased rate of gain during the period from weaning to a weight of 120 lb. but not after reaching this weight.

The average daily feed consumption of the pigs resorted at periodic intervals was lower during the early growth period but somewhat higher from a weight of 120 lb. to market weight, resulting in a similar over-all rate of consumption for those which remained stationary, were moved or were resorted.

The most consistent effect noted was a decrease in the efficiency of feed conversion. Pigs resorted required an additional 5 lb. and those moved 10 lb. more feed per hundred pounds of gain. These differences were reflected in an increase in cost of feed per hundred pounds gain of 13 and 26¢, respectively.

THE EFFECT OF CHANGING ANTIBIOTIC SUPPLEMENTATION — The many forms of antibacterial

(Turn to OHIO, page 93)

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Range Feed Poor; Fall Marketings May Start Early

FARGO, N.D.—Unusually hot, dry weather during July has lowered the range feed conditions and dimmed the prospects for fall and winter grazing in many range states, according to a report from the Crop and Livestock Reporting Service in Fargo.

Forage production over the area of the west producing two thirds of the range cattle and sheep have been significantly reduced because of the dry weather. Grazing conditions dropped in all but three of the 17 western states.

Texas, Oklahoma and New Mexico were the favored areas where adequate moisture during July helped range feed stay at a high level.

Livestock producers in the other 14 states are now facing an uncomfortable squeeze with prospects of the highest wintering costs since 1956-57.

There has already been relatively heavy summer shipments of cows, heifers and steers from the drier areas of the northern plains and inter-mountain states. Unless widespread moisture is received soon, it seems probable that fall marketings of range cattle and sheep will be earlier than they have been during the past two seasons, points out the North Dakota report.

In South Dakota, the shortage of rain caused range grasses to dry out and cure before reaching maturity. Ponds and reservoirs used for stock water are reported to be drying up now, too. Early hay crops harvested are expected to provide sufficient forage for a normal winter in this state.

In two dry states, Montana and Wyoming, the prospects for winter feed are reported to be poor. Weights on fall delivered calves are expected to be lighter than usual in the dry areas due to early curing of forage and the resulting drop in milk flow.

Drouth Area Farmers Given Feed Advice

STATE COLLEGE, MISS.—"Take stock of what you have in the way of grass and feed and make plans now so you won't run into a serious shortage of pastures or feed," W. R. Thompson, pasture specialist, Agricultural Extension Service, Mississippi State University, advises producers in the dry area here.

In many areas of the state there is no prospect of a big hay crop; very little silage and no grass at all are expected, he pointed out. The situation is critical in these areas, he said.

"Study your permanent pastures. Protect them. Even in dry areas protection from overgrazing will help the grass make a comeback when rains do come.

"Some folks are studying silage crops of corn or sorghum, trying to decide whether to cut them now or leave them for more growth," he said. "If you have early planted corn that has had a setback, go on and cut it now. Sorghum can be treated differently. It can stand a lengthy drouth, then following rain, come back and make more growth."

He also advises harvesting all the hay possible. "This year even weedy areas should be cut for hay. Cows will leave the part of the hay that they don't want," he said.

One of the best plans now is to plant for early winter grazing, Mr. Thompson said. This is especially true for dairy farmers who want to avoid a slump in milk production.

"Fallow land now and disk it every two weeks during August. Plant the first week of September. Count on oats making the quickest growth in early fall. Wheat does better planted later."

Campus Feed Mill Under Construction

DAVIS, CAL.—Construction of a $100,000 feed mill as part of a new experimental beef cattle feeding yard began Aug. 15 on the Davis campus, University of California.

The mill is expected to be completed sometime this winter. It will have a capacity of five tons of prepared feed an hour and will include machinery for rolling or grinding grain and also for pelleting rations. Accurate control and precision mixing will be emphasized, it was reported. Also to be constructed are storage facilities for about 350 tons of hay and 180 tons of grain.

In a recent meeting, regents of the university approved the building plans for the project, which is being entirely financed by private donations from the cattle feeders and allied industries.

Plans call for later construction of a feed lot to accommodate up to 400 cattle at a time, said James H. Meyer, head of the animal husbandry department, Davis.

"More than $100,000 has been collected to date," Mr. Meyer said, "enough to build the mill, but only about half the amount needed for the entire facility. A special committee of the California Cattle Feeders Assn., headed by D. E. Alexander of Napa, is continuing the drive for the remainder."

Mr. Alexander, with Harold H. Cole, former head of the animal husbandry department, and others began planning for the building of this facility several years ago in recognition of the need for more research in California's multi-million dollar cattle feeding industry, it was reported.

FEED FIRM TO OPEN

SANTA ROSA, CAL. — Barlas Farms, feed and grain supplier and processor, is expected to begin operations here in the immediate future.

Promote Supplemental Feeding of Yearlings

GREAT FALLS, MONT.—Montana Flour Mills Co. farm service department is again promoting late summer and fall supplementation of yearling cattle on grass that will be sold in the fall as feeders.

The firm notes that the grass is short in some areas and a little dry and "the shorter and the drier the grass, the greater will be the response and profit from the 'Ceretana' supplementation program."

In literature the firm sends out, it lists feeding recommendations. Some of the results it says may be expected are: "An increase of 0.5 lb. to 1 lb. per head per day; 100 lb. extra gain from each 200 to 450 lb. of pellets fed; pellet cost for each 100 lb. of extra gain to range $7@16; $0.50@$1.50 cwt. premium when sold on the market, and profit above pellet cost of $5@15 per head."

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MOO—ORE NEWS IN FEEDSTUFFS

OHIO

(Continued from page 91)

agents which may be added to swine rations make it possible to provide a wide variation in both the kind and level of supplementation. Further trials were conducted to evaluate the use of different antibiotics and other feed additives in both dry lot and pasture rations. Different additives compared were: Aureomycin (chlortetracycline), zinc bacitracin and penicillin (when added either as a feed supplement or in pure form), sulfaquinoxaline and streptomycin or arsanilic acid. The effect of changing the kind of antibiotic supplementation at the mid-point in the feeding period was observed and the influence on performance of including an antibiotic in dry lot rations during only the first or second half of the feeding period.

Dry Lot Results

In dry lot, results show that a combination of two purified antibiotics (15 gm. zinc bacitracin and 5 gm. crystalline penicillin) per ton of feed failed to improve the average performance of pigs. This lack of a response was also shown in a previous trial. Compared to the performance of pigs fed the basal ration, the same level of these antibiotics furnished as the feed supplement resulted in a 5% increase in growth rate and a saving of 3 lb. of feed per hundred pounds of gain.

There was little effect on performance from a change in type of antibiotic supplementation at a weight of 120 lb. Rate of gain during the second period for the two changeover groups was the same (1.83 lb./day).

When the basal ration was fed during either the first or second half of the feeding period and feed containing 20 gm. of Aureomycin during the other portion there was a marked response to the addition or exclusion of the antibiotic. It was evident that both rate of gain and efficiency of feed conversion were improved during the antibiotic feeding period and when antibiotic was removed from the ration adversely affected by its exclusion.

Pigs which received the basal ration plus 90 gm. of arsanilic acid per ton made the most rapid and economical gains.

On pasture, the response to the higher level of antibiotic supplementation (20 gm./ton) appeared to have been somewhat greater than to the lower level (10 gm./ton). In neither case was there a sufficient improvement in the efficiency of feed conversion to result in a lower feed cost per hundred pounds of gain where antibiotic was fed.

In agreement with the results obtained in dry lot a change in the type of antibiotic supplementation during the feeding period appeared to be of little value.

In this and previous trials, pigs on pasture have shown a more variable response to antibiotics than those fed in dry lot, particularly at the 10 gm./ton level of supplementation. However, in some seasons an improvement in performance fully equal to that obtained in dry lot has been obtained.

INTERMITTENT VS. CONTINUAL FEEDING OF AN ANTIBIOTIC TO GROWING-FINISHING PIGS— In three dry lot trials the effect on pig performance from different durations of antibiotic supplementation was observed. A feed containing 20 gm. of Aureomycin per ton was fed to growing-finishing pigs every other week, every other two weeks or continuously. The basal ration was fed during the periods when antibiotic was not included.

Even though the total consumption of antibiotic was the same, a difference in pig performance resulted from alternate weekly versus biweekly feeding. The increase in rate of gain and improvement in feed efficiency resulting from alternate 2-week feeding was similar to that obtained when the antibiotic-containing ration was fed continuously. While in one trial the greatest response in performance resulted from alternate weekly feeding, in another no improvement over control performance was obtained.

A comparison of the three methods of antibiotic feeding is illustrated by the rate of gain of pigs in all trials for the first eight weeks. During this period those which received the antibiotic-containing ration every other week, every other two weeks or continuously gained 8, 11 and 13% faster than controls respectively.

Hay Shortage to Pose Problem in Nevada

LAS VEGAS—Nevada's short hay crop will pose some feeding decisions that are a bit unusual for the state's ranchers and dairymen, according to agricultural specialists.

The decisions, it was reported, will involve how many cattle to keep and what type of rations will be more economical. "Regardless of whether the ration is forage alone or a forage and cereal grain combination, a lot of feed will have to be purchased," the specialists said.

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Program to Sell More Eggs Studied In North Carolina

RALEIGH, N.C. — A seven-point program to sell more of their product is under consideration by North Carolina egg producers.

The seven points were suggested for study at a recent meeting of representatives of the North Carolina Egg Industry and North Carolina Poultry Council.

Under consideration are: Programs with super markets; programs with chain store councils, restaurant associations, baker associations, food handlers and similar groups; programs of national scope, such as "March Egg Month"; programs of "spot" advertising with mass media, such as television, radio, newspapers and magazines; merchandising programs through seal identification of high quality North Carolina eggs; cooperative programs with N.C. State College and N.C. Department of Agriculture in consumer education, and newsletter to inform egg producers of activities.

A spokesman said the entire program will be known as the North Carolina Egg Marketing Program. It will be made possible by the assessment egg producers have voluntarily agreed to make.

The committee which met to discuss possible avenues for selling more North Carolina eggs consisted of: J. Atwell Alexander, Stony Point egg producer; John Hamby, president, North Carolina Egg Packers Assn., Durham; Maurice Pickler, New London egg producer; H. C. Kennett, president, North Carolina Poultry Council, Durham; Wayne A. Corpening, chairman, Egg Referendum Committee, Winston-Salem; Carl Tower, representing North Carolina Department of Agriculture, and E. W. Glazener, representing North Carolina State College.

Western Rails Cut Rate On Wheat for Export

GARDEN CITY, KANSAS—Wheat farmers of the Great Plains area have been granted a rate reduction by nine western railroads, a move hailed by the wheat men as the first step in opening up Asiatic markets for wheat grown in Kansas, Colorado and Nebraska.

"The reduction from 98½ to 81¢ cwt. for export only was the most significant freight reduction on wheat shipments in recent years," spokesmen for the wheat producers said, adding "it is a breakthrough in our efforts for rates to permit us to move Great Plains wheat to foreign markets competitively with that of other countries."

The rate reduction was announced in Chicago by the Transcontinental Freight Bureau, an organization represented by Union Pacific, Santa Fe, Great Northern, Northern Pacific, Chicago and Milwaukee, Western Pacific, Southern Pacific, Canadian Pacific and Canadian National railroads.

The farmers, operating through the Wheat Producers Transportation Committee, supported by the Colorado Wheat Administrative Committee, Kansas Wheat Growers Assn., Nebraska Wheat Commission and Nebraska Wheat Growers Assn., had asked for a reduction to 70c. A hearing was held in Chicago Aug. 3. The railroads took the request under consideration and announced the decision Aug. 11.

The producers' plea for reduced rates was based upon four points: "(1) The existing rate of 98½¢ prevented the movement of hard red winter wheat to the west coast for export to the Orient; (2) Asiatic markets are expanding rapidly and offer a good potential dollar market for U.S. wheat; (3) The Far Eastern countries have indicated they desire to purchase U.S. wheat at west coast markets. Last year, Japan bought 37 million bu. of Canadian wheat at Vancouver and purchased only 4 million bu. hard wheat from U.S. west coast ports; (4) With U.S. farmers producing a carryover of wheat each year, it is imperative that new markets be developed."

Face Fly Found in Six More States

WASHINGTON—The face fly, an irritating livestock pest that clings tenaciously around the eyes and noses of animals, has been found in six more states so far during 1960, the U.S. Department of Agriculture reports.

The pest has been found for the first time in Iowa and Missouri—the first finds west of the Mississippi River—and in Connecticut, Maryland, Tennessee and North Carolina.

It is also reported to have spread to many previously uninfested counties of states where infestations had already been reported. The fly now occurs nearly everywhere east of the Mississippi and north of Tennessee and South Carolina.

Some scientists believe it may be a potential carrier of eye worm and organisms that cause pink-eye disease and navel ill in new born calves. Agricultural Research Service scientists and entomologists of several state agencies are seeking means of controlling the pest.

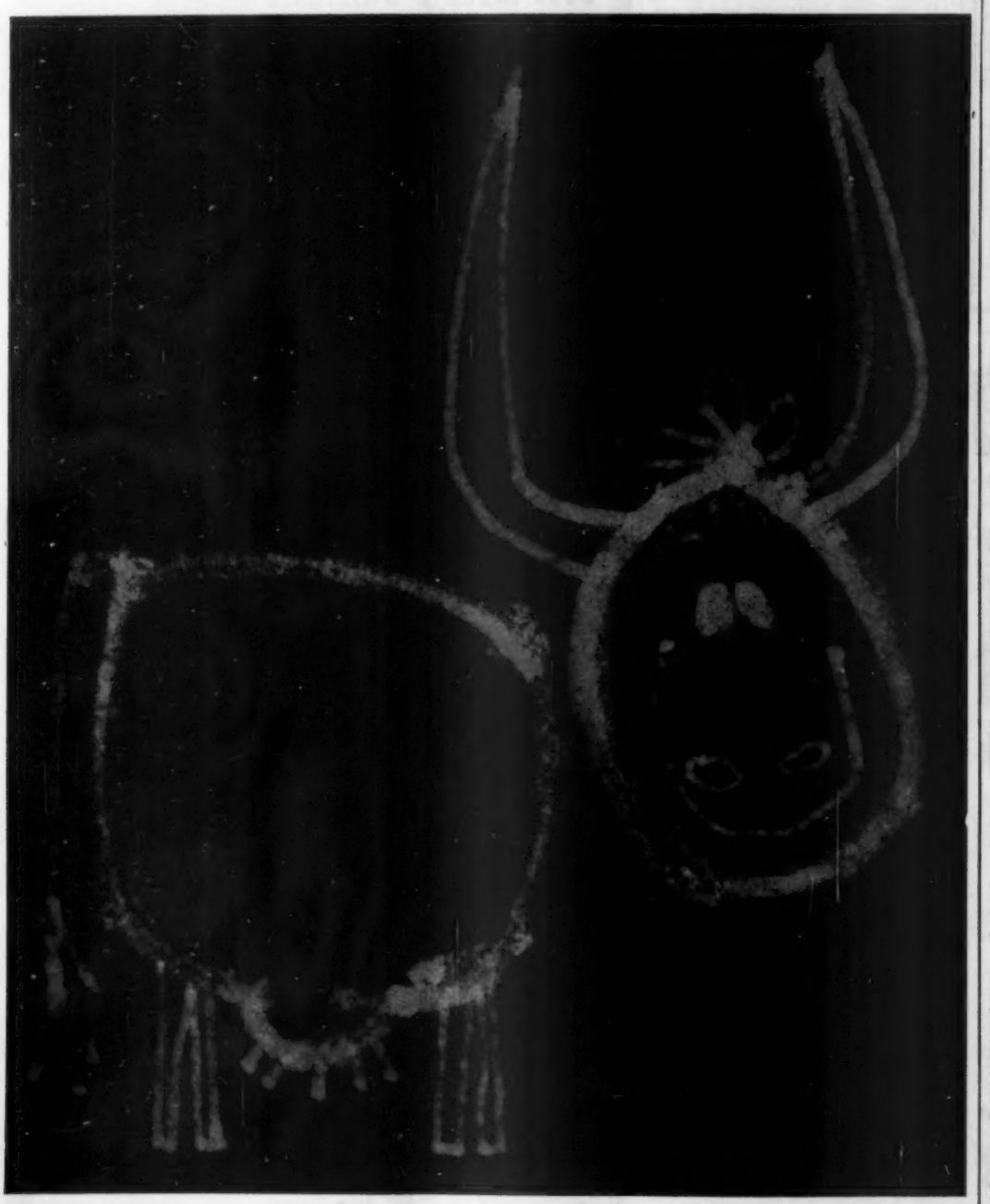
Entomologists at USDA's Agricultural Research Center, Beltsville, Md., are experimenting with both insecticidal sprays and poison baits that can be applied safely to the faces of dairy cows in stanchions.

'Feedlot of Future' Forum Held in Iowa

MASON CITY, IOWA—A "Feedlot of the Future" forum was held recently at the Hotel Hanford by the Miller Manufacturing Co., Modesto, Cal.

Firms represented at the meeting are Midwest distributors for the complete feedlot line of engineering and equipment for the Miller Manufacturing Co. They are: Dodgen Industries, Humboldt and Fort Dodge, Iowa; Harmon Building Service, Spencer, Iowa; King Construction Co., Iowa Falls, Iowa; Butler Mfg. Co., Minneapolis; Hi-Plains Steel Structures, Inc., Greeley, Colo.; R. F. Woychick Co., Faribault and Waseca, Minn.; Miller Manufacturing Co., Kansas City, and Universal Hoist Co., Cedar Falls, Iowa.

George Potter, operations manager for the Miller firm, said, "With the increased interest on the part of midwestern cattle and hog feeders in the modern labor-saving feedlots of the West, our firm is stepping up an intensive engineering and distribution program to meet the growing demand for labor-saving equipment for the Corn Belt area."



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HOOKER CHEMICALS PLASTICS

EGG GROUP

(Continued from page 1)

sippi as well as Tennessee to the north, Mr. Ford said.

Egg men in Louisiana have also expressed interest and it is possible that state may also be included.

Since the headquarters will be in Decatur, articles of incorporation will show the business headquarters as DeKalb County, Ga.

Just where the actual processing headquarters are established is yet undecided, Mr. Ford said.

While the Southeastern Egg & Poultry Assn. is working closely to bring about the formation eventually, the Southeastern Egg Marketing Assn. will be set up as a separate organization with a full-time egg marketing specialist in charge, Mr. Ford said.

The association's aim at this time is to formulate a plan to increase the orderly movement of egg consumption in the Southeast, he said. The association will concentrate most of its sales efforts in this part of the country to create, wherever possible, more consumption of eggs, possibly, through a promotion department.

Mr. Ford stressed the association has no intention of being a means of "dumping" eggs on markets outside of the South.

Actually, he said, it should be of great assistance to markets like the New York field, because it will serve to eliminate untimely movements to that area.

"We definitely will not offer a lot of eggs in big batches to New York or any other market, thus forcing down the prices there," he said. "Marketing will be on an orderly process."

However, he stressed the primary purpose of the association is to concentrate in the South in marketing, and it is the first time such an ambitious effort has been undertaken in this section.

"W know we are not selling all the eggs we can in the South," Mr. Ford said.

Exporting of Eggs

He also said the southern ports would possibly be used as an outlet for exporting eggs to foreign countries.

With such ports as Savannah, Jacksonville, Tampa, Mobile and others, he said, this should take up a lot of the surplus eggs, if any develop from time to time.

With the approval of the plan by the Southeastern Egg & Poultry Assn. directors, plans would get underway to call state meetings and the details would be presented to producers and state organizations would then be set up.

Each state, he said, would appoint temporary directors to serve until a permanent state organization is completed.

Each state will be allowed to purchase stock in the association and to have a hand in the operation.

Mr. Ford said invitations had already been received to present the plan to leaders in Virginia and Tennessee.

"We're going to move as fast as we can now that we have come along this far," he said. "We should be holding state meetings by the middle of October if not sooner."

Mr. Ford said the marketing plans "are without a doubt the biggest and most ambitious ever attempted in the South" and that "if the association proceeds as planned, it could be one of the most ambitious programs of its kind ever attempted."

Rumors have been floating around the South for some time that such an organization was being formed, but egg men were reticent to talk about them. However, it was known that at least two meetings had been held, one in Atlanta and one in Alabama in recent weeks.

One report had it the headquarters would be in North Carolina.

However, Mr. Ford pointed out after the meeting in Atlanta that it will be up to the directors to select a site for the permanent spot to serve as headquarters.

One of the details to be worked out is an agreement as to what percent of a laying operation's production will go into the association. Mr. Ford said it is important that the association have enough eggs to start operating.

However, he reported those attending the Atlanta meeting as being in favor of a sizeable portion of their production going into the association.

"Pleasantly Surprised"

"I was pleasantly surprised to hear them say they would allocate more than we expected, as a matter of fact," Mr. Ford said.

"Some of the men said they would give us 100% production, if we can find the outlets."

Mr. Ford said that "the South today is booming and offers one of the most flush markets in the nation. Population is on the increase in the South; plants are moving into areas that have been industrialized and bringing people with them. Florida, for example, has become one of the fastest-growing states in the Union in the last few years, population-wise.

"We think we can get organized with our selling force and find markets in an orderly manner in this area and really increase egg consumption."

Imports of Molasses Off, Exports Rise

WASHINGTON—Imports of industrial and feed molasses during June fell sharply from those of May and exports of the product rose, according to figures from the U.S. Department of Agriculture.

Imports during June totaled 40.3 million gallons, a decrease of 18 million from May, but over 15 million gallons more than was imported in June of last year. There is no limitation on imports of molasses into the United States unless it contains less than 6% nonsucrose solids, in which case it would become subject to the liquid sugar quota, according to USDA.

Total imports of molasses from Jan. 1 to June 20 came to 244.5 million gallons compared with 157 million during the same period of 1959. Principal sources of imports in June were: Cuba, Dominican Republic, Mexico, Jamaica and the French West Indies.

Exports of industrial and feed molasses from the U.S. and its territories in June totaled 2.7 million gallons compared with 200,000 in May and 1.4 million in June of last year. Almost all exports were from Puerto Rico. Most of the June exports went to the Netherlands and the United Kingdom.

Upjohn Asks Approval Of Turkey Treatment

WASHINGTON—Upjohn Co., Kalamazoo, Mich., has filed a petition proposing the issuance of a regulation "to establish the safe use of 350 gm. of novobiocin activity in turkey feed for the treatment and prevention of staphylococcal synovitis or arthritis in turkeys."

Notice of this petition was published in the Federal Register and is pursuant to the provisions of the Federal Food, Drug and Cosmetic Act.

RECEIVES AWARD

WAVERLY, ILL.—Fred D. Seiz, Seiz Mill & Feed Co., Inc., here was recently presented the Master Award for "Service to Agriculture" by McMillen Feed Mills. The award was presented by George E. Trutter, territory manager. Mr. Seiz was cited for 30 years service to livestock and poultry producers in the area.

Program Readied For Texas Exposition

COLLEGE STATION, TEXAS — "Decisions of vital importance to the Texas poultry industry "will be made during the annual meeting of the Texas Poultry Industry Exposition Aug. 23-25 in Fort Worth. Convention headquarters, along with all meetings, will be held in Hotel Texas.

Sure to be a highlight of the program, according to Ben Wormeli, extension poultry husbandman, will be the discussion on the last afternoon of the convention covering the feasibility of organizing an over-all poultry organization in the state. C. D. Calhoun, president, Texas Poultry Improvement Assn., will introduce the subject with floor discussions to follow.

Each of the three morning programs will feature nationally known authorities as featured speakers. Topics discussed will be turkeys on Tuesday, eggs Wednesday and broilers on Thursday. On Tuesday and Wednesday afternoons, Tom Lawrence, Kansas City, Mo., whose talk two years ago was a feature of the annual meeting, will pass on practical advice on personal relations and salesmanship.

Business sessions of the Texas Turkey Federation, Texas Egg Council and the Improvement Assn. along with the election of new directors and officers for each are scheduled for the first two afternoons of the convention.

Mr. Wormeli says plenty of entertainment and other activities have also been planned including the naming and crowning of the 1960 Texas Turkey Queen, luncheons and the always popular annual banquet and dance. In addition, 35 companies will have exhibits which will feature the latest in poultry equipment, feeds and supplies.

Dr. James Langston Killed in Crash

SPRINGFIELD, MO. — Dr. James W. Langston, director of development, Hoffman-Taff, Inc., Springfield, vitamin product manufacturer, was killed Aug. 15 in an automobile accident. His wife and a daughter were seriously injured and are still hospitalized.

Dr. Langston's car collided head-on with another automobile near Bolivar, Mo., as he was returning to Springfield.

Dr. Langston joined Hoffman-Taff in September, 1957. Previously he had been associated for many years with E. I. du Pont de Nemours & Co., Inc.

Funeral Services were held here Aug. 17.

TOP OF THE HOPPER

(Continued from page 2)

consumers than it is to farmers. Farmers can live without the chemicals used in the food industries much better than consumers can. Farmers' rates of production would be reduced and their costs would be increased. However, the decline in the volume of food produced would be so great that consumers would be paying the increased costs . . . Not only does a high sense of responsibility pervade the food industries, but the consumer has further assurance of quality and wholesomeness as a result of the highly competitive nature of the food business. No food product today can succeed except as its suitability for consumption is above suspicion. The food industries know this fact, and put their reputations behind the products they offer to the public." (Dr. Herrell DeGraff, Cornell University.)

AND ANOTHER: "We have the best and finest food supply in the history of this or any other country. Furthermore, it is the safest. Those of you who have traveled out of this country to any extent and experienced what some of us refer to as 'Bogota Belly,' or just the plain trots, regardless of whether you dine out or in, know what I mean. Let those who preach organic gardening visit the Far East, as I have, and really get the feel of it!" (Dr. Frederick J. Stare, chairman, department of nutrition, Harvard School of Public Health.)

There's more. Those interested in copies of the booklet can get them from the Publications Department of the Super Market Institute, 500 N. Dearborn St., Chicago 10, Ill.

The food industry, which includes the feed industry, needs more opportunities to tell its story to the public. The institute's move is in the right direction, and copies of the booklet in the right hands can do a great deal of good. However, what is still needed is a means of really dramatizing the positive side of the nation's food production in a way that will attract the attention of consumers as effectively as some of the "scare" stories have.

A FEED MILL MACHINERY manufacturer reports that despite the lull in over-all feed industry earnings earlier this year, most custom operators providing a good grinding and mixing service have been doing well. Also, he says his company has as many good prospects for new machinery sales as it has ever had at this time of the year, although financing is getting more difficult to arrange.

IT IS REPORTED that the Washington Cattle Feeders Assn. is setting up a group buying arrangement to purchase veterinary products and possibly feed ingredients and additives in a similar way. This, it is understood, would be a service offered to feedlots which make their own feed.

A GOOD-SIZED turkey grower who makes his own feed reports he's studied the cost angle and is sure he could come out as well or better buying a super-concentrate from a feed manufacturer rather than "build from the ground up."

ON THE OTHER HAND, a prominent feed manufacturer has taken a philosophical view on the subject of feeder-mixing. "We probably always will have to face growers going into the feed business as a result of money loaned by feed companies. It happened in the broiler area and it's happening in the turkey areas." There are plenty of other opportunities for business, he feels.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

A AND D FEEDING OIL

Boston: Demand slow; supply ample; 400 D, 3,000 A, 19¼¢; 300 D, 3,000 A, 19¢; 300 D, 2,250 A, 17½¢; 300 D, 1,500 A, 16¢; 300 D, 750 A, 14¢; 75 D, 750 A, 13½¢.

Denver: Demand light; trend steady; supply ample; 21¢.

Chicago: Demand fair; trend steady; supply ample; straight A feeding oil, with 10,000 units vitamin A per gram, 7@7¼¢ a million units of vitamin A, l.c.l., packed in 55 gal. drums, f.o.b. Chicago, drums included.

Minneapolis: Demand fair; supply ample; 10,000 A 31¢ lb.; 300 D, 2,250 A 17½¢ lb.; 300 D, 1,500 A 16¢ lb.; 300 D, 750 A, 15¾¢ lb.

ALFALFA MEAL

Memphis: Demand fair; trend steady to higher; supply ample; dehydrated, 17% protein, guaranteed 100,000 units, vitamin A, $48.

Portland: Demand good; trend steady; supply adequate; $42-48.90 sacked.

Philadelphia: Demand and supply fair; 17% dehy., $52.50.

Ft. Worth: Demand fair for dehydrated, slow for suncured; light offerings; sacked: Dehydrated 17%, 100,000 A, $49@50 truck or rail; suncured: 13% ¼ in. grind, No. 1, $45@46 truck, 15% fine ground dry, $48; with 2% fat added $50 rail or truck.

St. Louis: Demand slow; trend firm; supply limited; suncured, 13% fine, sacked, $45.50; dehydrated, 17%, 100,000 A, pellets, demand slow, trend steady, supply ample, bulk, $42.50.

Boston: Demand slow; supply ample; dehydrated 17%, $49@50; suncured 13%, pellets, $46.

Los Angeles: Demand slow; supply ample; trend steady; dehydrated meal, 17% protein, 100,000 A, $50@51; dehydrated pellet meal, 17% protein, 100,000 A, $52@54; suncured meal, 15% protein, $45@46; suncured crumbles, 15% protein, $47@48.

Omaha: Demand fair; supply ample; trend steady; 17% dehydrated, 100,000 A units, bulk pellets, $38; sacked meal, $43, Omaha basis.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A, $18@49.

Denver: Demand fair; trend steady; supply ample; dehydrated meal, sacked, $43; bulk pellets, $38.

Chicago: Demand quiet; trend steady; supply fair; dehydrated, 17% protein, 100,000 units vitamin A, $44.

Minneapolis: Demand fair; supply adequate; 17% dehydrated, 100,000 A units, reground pellets steady at $43; oiled reground pellets steady at $45.

Buffalo: Demand fair; supply adequate; trend steady; $55.50 sacked, Boston.

Kansas City: Demand slow; trend steady; supply ample; 17% dehydrated alfalfa, 100,000 A on arrival, pellets, $39@40 bulk; reground pellets, $41 bulk; 18% dehydrated alfalfa, 125,000 A on arrival, pellets, $42@43 bulk, reground pellets, $44 bulk; 20% dehydrated alfalfa, 150,000 A on arrival, $46@50 bulk, reground pellets, $46@51 bulk; suncured alfalfa demand slow, supply scarce, 13% pellets, $36@37 bulk, No. 1 ¼ inch $38.50 sacked.

ANIMAL FATS (STABILIZED)

Louisville: Demand improving; supply good; trend strong; quotations up ¼¢; bleachable white 6¼¢ lb. in tank; white tallow, 6½¢ lb. in tank; yellow grease, 6¢ lb. in tank.

Ft. Worth: Demand good; supply short; prime tallow, tank cars, 5¾¢; drums 7¼¢, f.o.b. north Texas packing plants with returnable drums.

San Francisco: Demand fair; supply ample; bleachable fancy, 6¼¢ lb.; yellow grease, 4¾¢ lb.

Ogden: Supply good; $5.75 cwt.

Boston: Demand good; supply adequate; tallow, 5¾¢ lb.; yellow grease, 5¼¢.

St. Paul: Demand still quite strong, but some buyers have backed off in face of recent fast price rise; bleachable fancy back to 5¾¢ lb., f.o.b. producer's plant, ¼¢ lower than last week.

Atlanta: Demand good; trend steady; supply limited; 5¼¢, f.o.b. Alabama-Georgia processing plants.

Salisbury, Md.: Demand good; supply ample, $5.75 cwt.

Chicago: Demand good; trend firm; supply fair; cwt., tank truck or carlots—bleachable fancy tallow, $5.87½@6; yellow grease, $5.25.

Kansas City: Demand fair; trend steady; limited supply available; prime stabilized tallow, 5¾¢ lb.

BARLEY FEED

Philadelphia: Demand slow; supply fair; $42.

Ogden: Supply good; rolled, $38@39 (whole barley, $33@34).

Milwaukee: Demand limited; supply ample; trend unchanged; feed barley, 85¢ bu., bulk; barley feed, $37 ton, sacked; ground feed barley, $41.50, ton in 100's.

Portland: Demand fair; trend steady; supply ample; $42.50.

17% Dehydrated Alfalfa Meal
and
Suncured Alfalfa Meal
FREMONT ALFALFA MILLS, INC.
South Bloom Road Fremont, Ohio
Phone: FE 2-1129

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

San Francisco: Demand fair; supply ample; rolled, $58.50; ground, $57.50.

Los Angeles: Demand fair; trend firmer; supply tighter; standard rolled, $2.88 cwt., sacked; standard ground, $2.88 cwt., sacked.

Boston: Demand and supply steady; $48.

Baltimore: Demand fair; supply light; trend unchanged; $46.50 sacked.

Denver: Demand and supply fair; trend lower; $2.05 bulk, $2.15 sacked.

Chicago: Demand good; trend firm; supply fair; $36 sacked.

BENTONITE (SODIUM)

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30-ton carlots: 80 granular $31.50, less than carlots $40; 200 mesh fine $31, less than carlots $40.

Chicago: Demand fair; supply ample; trend steady; f.o.b. Wyoming and South Dakota shipping points: 200 mesh $14 and net $13.75; fine granular (80 to 100 mesh) $14.25 and net $14; granular, 30 mesh $16.50 and net $16.35.

Denver: Demand slow; trend steady; supply ample; $24.50 warehouse.

BLOOD FLOUR

Louisville: Demand slow; trend steady; supply good; $75@80 ton, sacked.

BLOOD MEAL

Portland: Demand fair; supply ample; trend unchanged; $110 sacked.

San Francisco: Demand and supply fair; $5.40 per unit of ammonia, sacked.

Omaha: Demand slow; trend slow; supply plentiful; 80%, $90 sacked, Omaha.

Los Angeles: Demand slow; trend steady; supply adequate; $6 unit of ammonia, sacked.

Ogden: Supply good; $85 ton in 100 lb. bags, f.o.b. Ogden.

Louisville: Demand dull; trend steady; supply good; $75@80 ton, sacked.

Chicago: Demand slow; trend steady; supply ample; 80% protein, $120@125 sacked.

BONE MEAL (STEAMED)

Ft. Worth: Demand fair; supply light; sacked, $100, f.o.b. Ft. Worth local manufacture.

Portland: Demand fair; trend steady; supply ample; $95@97.50 sacked.

San Francisco: Demand good; supply ample; $75 sacked.

Boston: Demand and supply steady; $100.

Los Angeles: Demand and trend steady; supply limited; imported, $79.75, 20 ton lots, sacked.

Cincinnati: Demand good; trend strong; supply fair; $95 sacked, Cincinnati.

Louisville: Demand slow; trend steady; supply light; $80@85 ton, sacked.

Chicago: Demand and supply fair; trend firm; $75@80 sacked.

Denver: Demand and trend steady; supply ample; $110, Denver.

Buffalo: Demand and supply light; trend steady; $105.

BREWERS DRIED GRAINS

Milwaukee: Demand and supply fair; trend firm; $38 ton, bulk; $46 ton, 100's.

Philadelphia: Demand and supply fair; trend unsettled; $47.

San Francisco: Demand fair; supply ample; $54 sacked.

Ft. Worth: Demand slow; supply sufficient; 26% protein, $46, August.

St. Louis: Demand fair; trend steady; supply adequate; $36.

Los Angeles: Demand slow; trend steady; supply adequate; $49.50.

Boston: Demand good; supply tight; 26%, $48.

Cincinnati: Demand poor; trend higher; supply adequate; $45.

Louisville: Demand dull but improved; trend stronger; supply good; $45 ton, up $1 ton, sacked.

Chicago: Demand fair; trend strong; supply light; 26% protein, $37@38.

Buffalo: Demand fair; trend steady to higher; supply fair to poor; $48.50, Boston.

BREWERS DRIED YEAST

Portland: Demand fair; supply adequate; trend unchanged; 11@12¢ lb.

San Francisco: Demand fair; supply good; 10¢ lb., sacked.

Omaha: Demand and supply good; trend steady; 10½¢ lb.

Cincinnati: Carlots 11¢ lb.; 5 ton lots 11¢ lb.; ton lots 11½¢ lb.; all sacked.

Boston: Demand and supply steady; 11¢ lb.

Los Angeles: Demand slow; trend steady; supply adequate; 10¢ lb., 5 ton lots; 11¢ lb., 1 ton lots; 12¢ lb., less than ton lots, all sacked.

Louisville: Demand slow but better; trend steady; supply good; 10@10½¢ lb., sacked.

Omaha: 10½¢ lb.

Chicago: Demand fair; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12½¢ lb., l.c.l.

Milwaukee: Demand fair; trend steady; supply ample; 10½@12½¢ lb., ton lots, sacked.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Pittsburgh: Carlots 10¢ lb.; 5 ton lots 11¢ lb.; ton lots 11½¢ lb., all sacked.

New Orleans: Carlots 10¢ lb.; 5 ton lots 11¢ lb.; ton lots 11½¢ lb., all sacked.

New York: Carlots 9½¢ lb.; 10 ton lots 10¢ lb.; 5 ton lots 10½¢ lb.; ton lots 11¢ lb., all sacked, f.o.b. New Jersey.

Denver: Demand light; trend steady; supply ample; 9¢ lb.

Buffalo: Demand fair; trend steady; supply ample; $9.25 cwt.

BUTTERMILK (CONDENSED)

Philadelphia: Demand slow; supply fair; $4.25.

San Francisco: Demand fair; supply good; $5 cwt., drums.

Ogden: Supply ample; $4.40 per 100 lb. drum.

Boston: Demand and supply steady; 4¼¢ lb.

Los Angeles: Demand and supply limited; trend steady; 5½¢ lb., 100 lb. lots, in barrels; 4¼¢ lb., 500 lb. lots, in barrels.

Louisville: Trend steady; no demand or supply; $4.25 cwt. in paper drums.

Chicago: Demand quiet; trend firm; supply fair; cwt., 500 lb. bbls., $3.25@3.50.

CALCITE CRYSTALS AND FLOUR
(All prices net, sacked, including freight)

New York: Crystals $16.38, flour $10.38.
Buffalo: Crystals $17.11, flour $11.11.
Toledo: Crystals $18.96, flour $12.96.
Boston: Crystals $17.63, flour $11.63.
Lime Crest, N.J.: Crystals $11.50, flour $5.50.

CALCIUM CARBONATE

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk, in boxcars $8.04; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $12.75; 100 lb. bags $12; bulk, boxcar $10.50; bulk, hopper $10; coarse grind $1 premium, delivered Minneapolis.

Los Angeles: Demand slow; supply adequate; trend steady; flour $10.15, 20 ton cars; meal, $11.15, 20 ton cars, both sacked.

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt.

CHARCOAL

Los Angeles: Demand slow; supply adequate; trend unchanged; hardwood poultry, $156 less than ton lots, sacked; $144.40 ton lots, sacked.

San Francisco: Demand steady; supply ample; $141 sacked.

Boston: Demand and supply light; granular No. 6, $110.

Chicago: Demand fair; trend firm; supply fair; 50 lb. multiwalls, $110.

COCONUT MEAL

San Francisco: Demand good; supply tight; solvent, $61.50.

Portland: Demand slow; supply adequate; trend unchanged; $70.50.

Los Angeles: Demand slow; supply ample; trend weaker; copra cake, $63.

COD LIVER OIL (FORTIFIED)

Boston: Demand slow; supply ample; 300 D, 3,000 A, 20¢ lb.; 600 D, 2,250 A, 18½¢; 300 D, 2,250 A, 18¢; 600 D, 1,500 A, 17¢; 300 D, 1,500 A, 16½¢.

CONDENSED FISH SOLUBLES

Los Angeles: Demand slow; supply adequate; trend steady; 2@2½¢ lb.

Boston: Demand slow; supply plentiful; 2¢ lb.

Denver: Demand light; trend steady; supply ample; 3¢ lb., West Coast.

CORN GLUTEN FEED AND MEAL
(All quotations for all cities are bulk basis, sacked basis $5 more)

Minneapolis: Feed $41.60, meal $66.60.
Atlanta: Feed $45, meal $70.
Birmingham: Feed $43.60, meal $68.60.
Boston: Feed $46.50, meal $71.50.
Chicago: Feed $35, meal $60.
Cleveland: Feed $42.90, meal $67.90.
Denver: Feed $45.20, meal $70.20.
Ft. Worth: Feed $43.70, meal $68.70.
Indianapolis: Feed $40.20, meal $65.20.
Kansas City: Feed $35, meal $60.
Louisville: Feed $42.60, meal $66.60.
New Orleans: Feed $44.90, meal $69.90.
New York: Feed $46.10, meal $71.10.
Norfolk: Feed $45.50, meal $70.50.
Philadelphia: Feed $45.70, meal $70.70.
St. Louis: Feed $35, meal $60.

CORN OIL MEAL

Cincinnati: Demand fair; trend higher; supply adequate; $41.

Louisville: Demand near zero; supply light; trend steady; $47.45 ton, sacked, too high for feed mixers.

COTTONSEED MEAL

Omaha: Demand easy; trend steady; supply ample; 41% solvent, $60.70, delivered Omaha.

Wichita: Demand fair; supply ample; 41% old process, $67 sacked.

Memphis: Demand fair; trend steady; supply light; prime 41% protein, old process, $57 (nominal).

Portland: Demand slow; trend lower; supply adequate; $64.

Philadelphia: Demand and supply fair; new crop, $67.

Ft. Worth: Demand poor for meal, good for hulls; supply sufficient on meal, extremely scarce on hulls; 41% old process, $57, f.o.b. mills Ft. Worth; carlots solvent 2% fat added, $55.90, delivered Ft. Worth, pellets $2 additional, hulls $25.

San Francisco: Demand good; supply tight; 41%, $64; 44%, $65.50.

Ogden: Supply ample; 41%, $70@72.

Cincinnati: Demand poor; trend steady; supply adequate; $63.

St. Louis: Demand slow; trend steady; supply limited; solvent, $61.

Los Angeles: Demand limited; trend easier; supply moderate; $60@61.

Boston: Demand slow; supply plentiful; $74.50.

Louisville: Demand slow; trend steady; supply ample; new or old process, $66.50 ton, sacked.

Kansas City: Demand fair; trend steady to strong; supply old crop scarce; 41% old process, $63.50@64, Kansas City.

Denver: Demand fair; trend steady; supply ample; $59.

Atlanta: Demand fair; trend steady; supply limited; 41%, $51.50 for solvent, $54 for expeller, f.o.b. Georgia producing mills, late August-September.

Chicago: Demand fair; trend higher; supply light; Memphis basis, solvent, $59.

Buffalo: Demand poor; trend steady; supply fair; $79 sacked, Boston.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $46.50 sacked, $43.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

D ACTIVATED ANIMAL STEROL (POWDERED)

Kansas City: Demand fair; trend steady; supply ample; 1,500 ICU 9¾¢ lb.; 3,000 ICU 11¢ lb.

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 10¢ lb. warehouse.

D ACTIVATED PLANT STEROL (POWDERED)

Chicago: Demand fair; supply ample; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots, less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 28¢ lb., ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Portland: Demand fair; supply adequate; trend unchanged; $93.50, delivered for product carrying the minimum of 18% phosphorus, 31.5% calcium and a maximum of 0.1% fluorine; $92 dock for a minimum of 10 ton lots.

Cincinnati: 18% phosphorus, $81.02; 14% phosphorus, $71.03, f.o.b. Cincinnati.

Portland: Demand fair; supply ample; trend unchanged; $93.50, delivered for product carrying a minimum of 18% phosphorus, 31.5% calcium and a maximum of 0.1% fluorine; $92 dock for a minimum of 10 ton lots.

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $66.25, sacked, 100 lb. multiwall bags, bulk $63.25; truck load $67, sacked, in 100 lb. multiwall bags, bulk $64, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $57.07, f.o.b. Tupelo in 100 lb. multiwall bags, $54.07 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $71.80 (or $3.99 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .18%, $81 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck loads of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .19% $74.35 net ton, f.o.b. Houston, 100 lb., multiwall bags; $71.35 bulk.

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $66.25, sacked, 100 lb. multiwall bags, bulk $63.25; truck load $67, sacked, in 100 lb. multiwall bags, bulk $64, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $57.07, f.o.b. Tupelo in 100 lb. multiwall bags, $54.07 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $71.80 (or $3.99 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

DICALCIUM PHOSPHATE

Cincinnati: 18½% phosphorus, $92.15, f.o.b. Cincinnati.

Trenton, Mich.: 18½% P $83, bulk, boxcar/hopper car; $86, bagged, in carloads or truck loads; $96 bagged, in less than carload lots; 21% P, $94.65, bulk, boxcar/hopper car; $97.64, bagged, in carloads or truck loads; $107.65, bagged, less than carload; all prices f.o.b. Trenton, freight equalized with nearest producing point.

Chicago: Bulk 18.5% phosphorus, carlots or trucks $83; 20,000 lb. or more $86 net ton in 100 lb. papers; less than 20,000 lb. $96, basis Chicago Heights, Ill., or Nashville, Tenn.; 21% phosphorus, carlots or trucks, bulk $94.65; 20,000 lb. or more, per net ton in 100 lb. papers, $97.65 and less than 20,000 lb., $107.65, basis Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $86 (or $4.65 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truckloads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum calcium 24% $86, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum

calcium 23%, maximum fluorine .12%; carload and truckload $80.50, sacked in 100 lb. multiwall bags, bulk $77.50, f.o.b. Texas City.

Denver: Demand good; trend steady; supply ample; $93.50, delivered.

DISTILLERS DRIED GRAINS

San Francisco: Demand fair; supply ample; solubles, $79 sacked.

Cincinnati: Demand poor; trend steady; supply adequate; $53.

Louisville: Demand dull; trend steady; supply light; not much production anticipated before October; bourbon grains, light, $51, dark $53, solubles $71, all sacked.

Philadelphia: Demand slow; supply light; dark, $61.25.

Boston: Demand active; supply short; nearby, $61.

Buffalo: Demand fair to good; supply fair to poor; trend higher; $61, Boston.

DRIED BEET PULP

Ogden: Supply ample; $41@46 ton.

Milwaukee: Demand good; trend strong; supply limited; $74.50 ton, Chicago (plain or molasses).

Los Angeles: Demand limited; supply moderate; trend steady; $45.40@45.50.

Portland: Demand good; supply tight; trend unchanged; $51.60 sacked.

San Francisco: Demand good; supply fair; $41.30.

Boston: Demand good; supply scarce; sacked, $77 nominal.

Denver: Demand fair; trend steady; supply limited; $75, f.o.b.

Atlanta: Demand fair; trend steady; supply nominal; $58.77, delivered late September-December, new crop.

Buffalo: Demand fair; trend steady to higher; supply poor; $77 sacked, Boston.

DRIED BUTTERMILK

Boston: Demand steady; supply short; 14¢ lb.

Ogden: Supply ample; $17.25 cwt.

Milwaukee: Demand and supply limited; trend unchanged; $12.50.

Los Angeles: Demand slow; trend steady; supply adequate; 13½@13¾¢ lb., sacked.

San Francisco: Demand fair; supply ample; 13½¢ lb., sacked.

Louisville: Demand dull; trend steady; supply normal; 12@12½¢ lb., sacked.

Chicago: Demand moderate; trend firm; supply fair; cwt., medium acid, $10.75@11; sweet cream, $10.75@11, both sacked.

Buffalo: Demand fair; trend steady; supply limited; $12.85 cwt.

DRIED CITRUS PULP

San Francisco: Demand and supply fair; $46 sacked.

Los Angeles: Demand limited; supply ample; trend steady; orange pulp, $40; lemon pulp, $38.

Boston: Demand light; supply scarce; sacked, $47.50 nominal.

Atlanta: Demand good; trend steady; supply limited; pulp $47.50@50, meal $40@42.50, f.o.b. Florida processing plants.

DRIED SKIM MILK

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked.

Boston: Demand good; supply short; 12½¢ lb.

Milwaukee: Demand and supply limited; trend unchanged; $13.

Portland: Demand fair; trend unchanged; supply good; 13¢ lb.

San Francisco: Demand and supply fair; 14½¢ lb., sacked.

Ogden: Supply good; $15.15 per 100 lb. drum.

Omaha: Demand good; trend strong; supply short; 12¢ lb.

Philadelphia: Demand slow; supply fair; $13.

Los Angeles: Demand and supply limited; trend steady; 15¢ lb., less than ton lots; 14¾¢ lb., ton lots, both sacked.

Louisville: Demand dull; trend steady; supply ample; 12@12½¢ lb., sacked.

Chicago: Demand slow; trend unchanged; supply adequate; $10.50@10.75 cwt., sacked.

Minneapolis: Demand is still off; price is down again from $11.75 cwt. last week to $11.50.

Buffalo: Demand fair; trend steady; supply ample; $13.85 cwt. spray.

DRIED WHEY

Philadelphia: Demand slow; supply fair; $6.25.

Ft. Worth: Demand fair; supply adequate; carlots, standard $5.75 sacked, delivered Ft. Worth; ton lots, $6, f.o.b. warehouse, Ft. Worth.

San Francisco: Demand steady; supply good; $5.75 cwt., sacked.

Ogden: Supply normal; $6.90 cwt., sacked.

Boston: Demand fair; supply adequate; 5¼¢ lb.

Portland: Demand fair; supply ample; trend unchanged; $5.95 cwt., sacked.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked.

Kansas City: Demand fair; trend steady; supply adequate; regular or partially delactosed, $5.50 cwt., sacked.

Omaha: Demand fair; supply plentiful; trend strong; $5.50 cwt. or 5½¢ lb.

Los Angeles: Demand slow; trend steady; supply adequate; $5.35 cwt., carloads; $5.60 cwt., l.c.l., both sacked.

Louisville: Demand dull; trend shade weaker; supply ample; 5¾@6¢ lb., sacked.

Denver: Demand fair; trend steady; supply ample; $5.75 cwt., truck load.

Minneapolis: Demand slow; supply ample; steady at $5.45 cwt.

Chicago: Demand slow; trend firm; supply ample; $4.75 cwt., sacked.

FEATHER MEAL (HYDROLYZED)

Los Angeles: Demand poor; trend steady; supply adequate; $1, unit of protein, sacked.

Ft. Worth: Demand good; supply sufficient; 85-87% protein, $72.50@75 nominal, sacked, f.o.b. trucks, north Texas plants.

Boston: Demand steady; none offered; $69 nominal.

Salisbury, Md.: Demand fair; supply ample; $79, f.o.b.

Atlanta: Demand fair; trend steady; supply good; $72, f.o.b. Alabama-Georgia processing plants.

FISH MEAL

Milwaukee: Demand limited· trend weak; supply adequate; 60%, $113 ton, sacked, Chicago.

Portland: Demand fair; trend mixed; supply adequate; $1.60@1.65 per protein unit, sacked.

Ft. Worth: Demand fair; supply sufficient; sacked, 65% protein, Peruvian $91, scattered August; 60% protein menhaden $99, delivered Ft. Worth.

San Francisco: Demand slow; supply ample; $1.35 per unit of protein.

Los Angeles: Demand slow; trend easier; supply ample; local production 60% protein, $1.45@1.50 unit, sacked.

Ogden: Supply good; $1.50 per unit, f.o.b. Coast; 65%, $110@112.

Omaha: Demand good; supply plentiful; trend fair; 60% menhaden, $115, f.o.b. Omaha.

Cincinnati: Demand fair; trend steady; supply adequate; $120.

Boston: Demand improved; supply irregular; 60%, $93 sacked; 57%, sacked, $85.

Louisville: Demand slow; trend steady; supply light; $125 ton, sacked.

Denver: Demand fair; trend steady; supply short; $1.54 per protein unit, f.o.b. West Coast.

Atlanta: Demand fair; supply good; trend steady; 60% menhaden, $90@95, f.o.b. Atlantic and Gulf ports.

Chicago: Demand on slow side; supply liberal; trend firm; sacked: menhaden, East Coast $90@95; Gulf $90@95; menhaden scrap, East Coast $86@91; Gulf $86@91; Canadian herring meal $1.55 a unit of protein.

Minneapolis: Demand slow; supply ample; no price change; Gulf menhaden at $100@105 sacked, truck lots, Minneapolis; 70% Canadian herring $1.60 a unit, f.o.b. West Coast, immediate shipment; Alaskan herring $1.52 a unit, f.o.b. West Coast, subject to production; West Coast 60% blended at $114@116 sacked, delivered Minneapolis.

Buffalo: Demand limited; trend barely steady; supply ample; 60% menhaden, $105 bulk, $110 sacked.

HAY

Philadelphia: Demand slow; supply light; $24.50@25.50.

Cincinnati: Demand slow; trend steady; supply adequate; No. 1 timothy, $30; No. 2 timothy, $27; No. 1 red clover, $32; clover mixed with straw, $25.

Wichita: Demand low for prairie, fair for alfalfa; supply sufficient; prairie, $19@21; alfalfa, $20@22 baled.

Ft. Worth: Demand fair for alfalfa, practically nil for others; supply sufficient; carlots, baled, No. 1 alfalfa, $40@42; No. 2 $38@40; No. 2 prairie nominal $30@32; No. 2 Johnson nominal $28@30, delivered Texas common points.

Los Angeles: Demand limited; supply moderate; trend steady; U.S. No. 1, $32@34; U.S. No. 2 leafy, $29@30; U.S. No. 2 green, $30@31; U.S. No. 2, $27@28.

Portland: Demand good; trend steady; supply adequate; $30@34 ton, baled, Portland-Seattle.

Ogden: Supply good; $20 ton in the field; $23 ton in the barn.

Boston: Demand slow; supply improved; No. 2 timothy, $40@43.

Louisville: Demand very dull; trend easy; supply good on old hay, some new hay available but dealers not handling for fear of heating, and as they have plenty of old hay on hand; No. 1 hay, any variety (local) $30 ton; No. 2, $28; straw, any variety, No. 1, $18@20 ton.

HOMINY FEED

Milwaukee: Demand and supply fair; trend higher; $45.50 ton, sacked, Chicago; $41 ton, bulk, Chicago.

Memphis: Demand poor; trend steady; supply ample; white, $42.70; yellow, $42.70.

St. Louis: Demand slow; trend firm; supply ample; yellow, $38.50.

Cincinnati: Demand fair; trend higher; supply adequate; $43.

Boston: Demand fair; supply spotty; $51.

Louisville: Demand near zero; trend steady; supply light; $47.50 ton, sacked; wholesalers' claim it is priced out of the very poor market for the product.

Chicago: Demand slow; trend firm; supply fair; $39.50.

Buffalo: Demand fair; supply fair to poor; trend higher; $51, Boston.

Kansas City: Demand fair; trend steady; supply adequate; white or yellow, $32.50@33.

LINSEED OIL MEAL

Portland: Demand slow; supply limited; trend unchanged; $84 sacked.

Philadelphia: Demand fair; supply light; 34%, $70.70.

Wichita: Demand fair; supply ample; 34%, $78 sacked.

San Francisco: Demand fair; supply ample; $67.50.

Ft. Worth: Demand slow; supply sufficient; 34% protein, solvent, $70, August rail.

Los Angeles: Demand slow; supply adequate; trend easier; local production, 31% protein, $73, old crop.

Milwaukee: Demand limited; supply fair; trend unchanged; $69.50 ton, sacked, Chicago (expeller); $65 ton, sacked, Chicago (solvent).

Omaha: Demand slow; trend steady; supply tight; 34% solvent, $58.80 bulk; 32% old process, $64.30, Omaha basis.

Cincinnati: Demand poor; trend steady; supply adequate; new process, $53.50; old process, $59.50, Minneapolis.

Boston: Demand slow; supply ample; $71 @73.

Louisville: Demand dull; trend steady; supply light; old process, $77 ton, sacked; new process, $72 ton, sacked.

Chicago: Demand fair; supply adequate; trend firm; Minneapolis basis, solvent $63, expeller $58.50.

Denver: Demand slow; trend weaker; supply ample; $71.30 sacked.

Minneapolis: Market quiet; price still $53.50 on solvent, $58.50 on expeller.

Kansas City: Demand slow; trend steady; supply ample; solvent process, $52.50@53; old process, $58@58.50, Minneapolis.

LIVER AND GLANDULAR MEAL

Omaha: Demand, trend and supply fair; 65%, $175 sacked, Omaha.

MALT SPROUTS

Milwaukee: Demand good; trend higher; supply fair; $33@33.50 ton, bulk; $38.50@39.50 ton, odd weights; $41.50@42 ton, even weights, sacked.

Chicago: Demand quiet; supply ample; trend firm; $38.

Cincinnati: Demand fair; trend steady; supply adequate; No. 1, $39.

Boston: Demand and supply light; $48 sacked.

MEAT AND BONE MEAL

Wichita: Demand fair; supply inadequate; 50%, $85 sacked, f.o.b. plant.

Denver: Demand fair; trend steady to lower; supply ample; $65, f.o.b. plant.

St. Paul: Demand poor; supply ample; price down to $74@78.

St. Louis: Demand fair; supply ample; trend easy; $72.

San Francisco: Demand fair; supply ample; $1.40 per unit of protein.

Ft. Worth: Demand good; supply fair; meat and bone 50%, $71.50 bulk; $74.50 sacked, f.o.b. Ft. Worth.

Chicago: Demand quiet; trend steady; supply fair; 50% protein, $75@80 sacked.

Buffalo: Demand fair; trend steady; supply light; 50% meat scraps, $77.50 bulk; $82 sacked.

Kansas City: Demand fair; trend steady; supply ample; 50%, $72.50@75.

Omaha: Demand good; supply plentiful; trend fair; $77.50.

Ogden: Supply good; $75 per ton, 50% protein, in 100 lb. bags.

Los Angeles: Demand limited; trend unchanged; supply ample; 50% protein, $1.50 unit.

Boston: Demand and supply steady; $1.10 per protein unit; converted 50%, $67.50.

Cincinnati: Demand good; trend steady; supply fair; 50% meat and bone scraps, $75, Cincinnati.

Portland: Demand good; trend mixed; supply adequate; $70@72.50 sacked.

Louisville: Demand slow; trend steady; supply good; $75@80 ton, sacked.

MILLFEED

Minneapolis: Demand somewhat improved; supply ample; bran up slightly to $32.50@33; middlings weaker at $31.50@32; red dog slightly stronger at $48.

Kansas City: Demand fair; trend steady; supply ample; sacked bran, $31.50@32; bulk bran, $26@26.50; sacked shorts, $33@33.50; bulk shorts, $28@28.50; bulk middlings, $26@26.50.

Chicago: Carlots, bulk—middlings $31, bran $31.50 and red dog $45.

Ft. Worth: Demand good on decline; offerings sufficient; bran bulk $35.50, burlaps $39.50; gray shorts bulk $37, burlaps $41; bulk middlings $36, delivered Texas common points; bran $3@3.50 lower, shorts $3.50@4.50 lower and midds. down $3 compared with previous week.

Wichita: Demand fair; supply about offsets demand; basis Kansas City: Bran $31.75, shorts $33.75; bran declined $3 and shorts $4, compared with the preceding week.

Omaha: Demand fair; trend steady; supply ample; bran, $32.50; gray shorts, $34; standard midds., $28.50; all sacked, Omaha basis.

Memphis: Demand poor; trend steady; supply ample; wheat bran, $33.70; gray shorts, $36.20; standard midds., $33.70.

Louisville: Demand dull; supply good; trend very weak; bran, $42.60 ton, sacked, down $3 ton; mixed feeds, $44.10 ton, sacked, down $3.50 ton; shorts, $46.10 ton, sacked, down $4 ton.

St. Louis: Demand fair; supply ample; trend steady; sacked bran, $36.50; shorts, $38.50; bulk bran, $31; middlings, $31.50.

Cincinnati: Demand fair; trend lower; supply adequate; bran, $41; middlings, $45.

Buffalo: Sacked differential over bulk continued at $4.50; bran down $3.50 from last week; middlings off $4@4.50 from a week ago; red dog unchanged; Aug. 17 quotations—bulk bran $33.50@34, sacked $38@38.50; bulk middlings $34@34.50, sacked $38.50@39; bulk red dog $53@55, sacked $54@59.50.

Boston: Demand slow; supply ample; bran, $43; middlings, $47.50.

Philadelphia: Demand spotty; supply fair; trend unsettled; bran $44, standard middlings $46, red dog $60.50.

Denver: Demand and supply fair; trend steady; shorts $36.50, bran $35.25, millrun $36.

Ogden: Supply ample; to Utah and Idaho: Red bran and millrun, $34; midds., $39. To Denver: Red bran and millrun, $41; midds., $46. To California: Red bran and millrun, $41.50; midds., $46.50, f.o.b. San Francisco and Los Angeles.

Portland: Demand slow; supply tight; trend unchanged; $38.50@39.50.

San Francisco: Demand slow; supply ample; millfeed $44, red bran $47.25.

Los Angeles: Demand good; trend stronger; supply moderate; standard millrun $45; red bran demand fair, trend weaker; supply moderate, $46@46.50.

MINERAL FEED

Sioux City: 50 lb. mineral blocks 8.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

Wichita: Demand good; supply sufficient; all-purpose with iodine, 50-lb. blocks $97.50, 100-lb. bags $92.50, f.o.b. plant.

Portland: Demand good; trend steady; supply ample; $44@45 sacked.

San Francisco: Demand steady; supply good; all purpose with iodine, $70 sacked.

Ft. Worth: Demand fair; supply adequate; all purpose granules $90, block $70; mineral phosphorus 6% granules $106, block $113; cattle sheep mineral 7% phosphorus granules $100, block $107; hog mineral phosphorus 3½% granular $87, phosphorus 2% $77 (all in 50-lb. paper bags).

Ogden: Supply ample; $113 per ton in 50 lb. blocks; $103 per ton, granular 50 lb. bags.

MOLASSES

Denver: Demand fair; trend steady; supply ample; 10½¢ gal. New Orleans, $39.25 ton, Denver.

Atlanta: Demand fair; trend steady; supply limited; citrus, $18, f.o.b. Florida processing plants.

Minneapolis: Steady at $30, tank truck, delivered.

Boston: Demand fair; supply ample; 14¢ gal. in tank cars.

St. Louis: Demand slow; trend steady; supply adequate; 10½¢ gal., tank car, New Orleans.

Milwaukee: Demand fair; trend firm; supply ample; blackstrap, 10@10½¢ per gal., f.o.b. New Orleans.

Cincinnati: Demand fair; trend steady; supply adequate; 10½¢ gal., New Orleans.

Memphis: Demand poor to fair; trend steady to better; supply ample; blackstrap, 10¼¢ gal., tank car, f.o.b., New Orleans, and $25 ton, delivered Memphis, truck.

Los Angeles: Demand excellent; supply ample; trend steady; $21.50, f.o.b. tank cars; $21.75, f.o.b. tank trucks.

San Francisco: Demand and supply good; $21.75 ton, f.o.b. cars, Richmond, Cal.

Ft. Worth: Demand fair; supply sufficient; blackstrap, 11¢ gal., f.o.b. Houston; delivered Ft. Worth truck $25.50 seller's market price on date of shipment.

Kansas City: Demand fair; trend firm; supply limited; blackstrap, 10¼@10½¢ gal., New Orleans.

Buffalo: Demand fair; supply good; trend steady; 14¢ gal., f.o.b. Albany.

Louisville: Demand slow; trend steady; supply normal; 10½¢ gal., tank car lots, Gulf ports.

OAT PRODUCTS

Los Angeles: Demand slow; supply limited; trend unchanged; local production, pulverized, $63 sacked.

Boston: Demand slow; supply ample; white pulverized, $55; reground oat feed, $32.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats, $47@53.

Memphis: Demand poor; trend weak; supply ample; 3½% protein, reground oatfeed, $24.75.

Chicago: Demand slow; trend easy to firm; supply fair; reground oat feed, $16.50; No. 1 fine ground feeding oatmeal, $71; feeding rolled oats, $75.

Minneapolis: Peak movement has pushed prices down generally; feeding rolled at $73; feeding oatmeal $64; pulverized $44; reground oat feed $24; crimped at $57.50.

Philadelphia: Pulverized whites demand slow, supply fair, $49; domestic demand slow, supply light, $28; Canadian oatfeed demand slow, supply light, $28.50 sacked, nominal.

Portland: Demand fair; trend firm to stronger; supply limited; $50@52.50.

Ft. Worth: Demand slow; supply sufficient; oat millfeed, 10% protein, $42.20, reground $28.70 sacked, new jutes.

Louisville: Demand slow; supply normal; trend easy; reground, steady, $27.80 ton; rolled oats, easy, $81.80 ton, off $1 ton; feeding oat meal, steady, $78.80 ton; pulverized oats, steady, $51.80 ton; crimped oats, weak, $64.80, off $1.50 ton, all sacked.

OYSTER SHELL

Portland: Demand fair; trend steady; supply ample; $27@35 sacked.

Los Angeles: Demand steady; supply ample; trend unchanged; $15.40 sacked.

Cincinnati: Demand fair; trend steady; supply adequate; 80 lb. bags, $23.85; 50 lb. bags, $24.10; 25 lb. bags, $26.35.

Boston: Demand and supply steady; $26.05 in paper.

San Francisco: Demand fair; supply ample; local $15, eastern $26 sacked.

Louisville: Demand slow; trend steady; supply good; in 80 lb. paper sacks $23.45, in 50 lb. paper sacks $23.70, in 25 lb. paper sacks $25.95.

PEANUT MEAL

Milwaukee: Demand and supply fair; trend unchanged; 26%, $47 ton sacked, Chicago; $38 ton bulk, Chicago.

Atlanta: Demand fair; supply limited; trend steady; 45%, $50 for solvent, $55 for expeller, f.o.b. Alabama-Georgia producing mills.

PEAT MOSS

Chicago: Demand and supply fair; trend firm; standard 7½ cu. ft. bale $3.80.

Portland: Demand slow; trend steady; supply adequate; $3@3.15 per 5.6 cu. ft. bale.

San Francisco: Demand and supply fair; $3.65 bale.

Philadelphia: Demand slow; supply fair; $2.89, f.o.b. pier.

Los Angeles: Demand steady; supply ample; trend unchanged; Canadian 5.6 cu. ft. bales, $3.65.

Cincinnati: Demand and supply good; trend steady; truck loads, $3.45 bale, f.o.b. Cincinnati.

Boston: Demand and supply steady; $3.15 bale in carlots.

POTASSIUM IODIDE, U.S.P.

Chittenango, N.Y.: Demand good; trend firm; supply ample; standard blends, 90% KI, 10% stearate or carbonate mixture: 100 lb. drums $1.25½ lb.; 200 lb. and up $1.23½ lb., all delivered.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures: 250 lb. drums $1.35, 200 lb. in 100-lb. drums $1.35, 100 lb. drums $1.38, 25 lb. drums $1.41, f.o.b. Cincinnati.

POULTRY BY-PRODUCTS

Atlanta: Demand good; trend steady; supply limited; $73, f.o.b. Alabama-Georgia processing plants.

Salisbury, Md.: Meal demand fair; supply ample; $80, f.o.b.

Ft. Worth: Demand good; supply scarce; 55% protein, $78@82.50 nominal, sacked, f.o.b. north Texas plants.

Los Angeles: Demand fair; trend steady; supply adequate; $1.30 unit of protein, sacked.

Boston: Demand fair; supply light; $70.

RIBOFLAVIN

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gram in less than ton lots in 3.36@16 gm./lb. mixtures; 3¢ in ton lots or more, freight prepaid or paid to destination.

RICE BY-PRODUCTS

San Francisco: Demand good; supply ample; bran, $43 sacked; polish, $47 sacked.

Ft. Worth: Demand slow; supply limited; rice bran, $31@32, f.o.b. south Texas rice mills; hulls, $3.50 sacked, f.o.b. mills September delivery.

Atlanta: Demand fair; trend steady; nominal supply; bran $45, delivered September.

Los Angeles: Demand and supply limited; trend steady; California production high fat content, bran $48 sacked.

SCREENINGS

Minneapolis: With practically no supply, buyers show little interest; Canadian at

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$20 nominal, Duluth; domestics nominal, lights $13@23, mediums at $24@33, and heavies at $34@43; flax screenings, 15% basis, at $38.

Chicago: Demand quiet; trend easier; supply ample; ground grain, $31.50; Canadian $23.50.

Buffalo: Demand fair; supply fair to poor; trend steady; ground and sacked, $36.75, N.Y. L&R; unground in bulk, $36, N.Y.

Cincinnati: Demand fair; trend steady; supply adequate; $21.50@22.50, Cincinnati.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

(Sacked)

Atlanta: $20.40@20.67.
Buffalo: $25.31@25.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.85@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.06.
Philadelphia: $24.32@24.95.
St. Louis: $24.14@24.27.

SORGHUMS

Los Angeles: Demand good; supply very limited; trend strong; milo $2.17½ cwt.

Ft. Worth: Demand good; offerings light; No. 2 yellow milo, $1.88@1.90 cwt., delivered Texas common points.

Ogden: Supply ample; $43@@44 ton.

SOYBEAN OIL MEAL

Minneapolis: Prices up at end of week; 44% selling for $44, bulk Decatur; 50% at $50, bulk Decatur.

Denver: Demand fair; trend steady; supply ample; $60.50 bulk, 44%.

Atlanta: Demand fair; trend steady; supply good; 44%, $56.10, delivered.

Chicago: Decatur basis, carlots—44%, unrestricted billing $49, eastern trunk lines $46.50; 50% protein, unrestricted $54, eastern trunk lines $50.50.

Kansas City: Demand improved; supply adequate; trend stronger; 41% solvent process, $46.50@47 bulk, Decatur.

Los Angeles: Demand slow; trend easier; supply adequate; $68.90@69.90.

Cincinnati: Demand fair; trend lower; supply adequate; $47, Decatur.

Milwaukee: Demand fair; trend weaker; supply adequate; $48@49 ton, bulk, Decatur.

Ft. Worth: Demand fair; supply sufficient; 44%, $56.60, immediate; $57.60, August; $58.50 first half September; 50%, $64.80, immediate, $65.80 August, $66.80 first half September.

San Francisco: Demand fair; supply ample; $69.90.

Philadelphia: Demand and supply fair; 44%, $46, Decatur.

Wichita: Demand good; supply ample; 44%, $62, 50% $68 sacked; 44% $59, 50% $65 bulk, f.o.b. Wichita.

Memphis: Demand fair; trend steady; supply ample; prime 44% solvent, $52 bulk, f.o.b. Memphis.

Portland: Demand fair; trend lower; supply ample; $64.40@67.90.

Omaha: Demand good; trend strong; supply ample; 44%, $51.60 bulk, delivered Omaha.

St. Louis: Demand slow; trend firm; supply ample; 44%, $52.

Ogden: Supply ample; 41% protein, $69@71 (50% protein, $74@76).

Boston: Demand slow; supply plentiful; 44%, $47@48; 50%, $55@55.50, both f.o.b. Decatur.

Louisville: Demand dull; trend very soft; supply good; off $3 ton; $57.70 ton, sacked.

TANKAGE

Cincinnati: Demand good; trend easy; supply fair; 60% digester, $75, Cincinnati.

St. Louis: Demand fair; trend easy; supply ample; $73.

Chicago: Demand slow; trend firm; supply fair; 60% protein, $75@80 sacked.

Kansas City: Demand slow; trend steady; supply ample; 60% digester, $70.

Wichita: Demand fair; supply inadequate; 60%, $85 sacked, f.o.b. plant.

Ft. Worth: Demand fair; supply ample; 60% digester, $76 sacked, Ft. Worth.

Omaha: Demand good; trend fair; supply plentiful; $77.50 bulk.

Louisville: Demand dull; trend steady; supply good; 60% protein, $75@80 sacked.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; supply limited; 5½¢ lb., f.o.b. south Texas area.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; 50 lb. or more $1.45, less than 50 lb. $1.50, freight allowed to destination.

WHEAT GERM MEAL

Buffalo: Demand and supply fair; trend steady to higher; $64 sacked, f.o.b. Buffalo.

Minneapolis: Steady at $56, sacked.

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GRAIN

(Continued from page 1)

trates figure is 3% more than the previous record high for Aug. 1 set in 1959. By regions, some of the sharper increases in feeding rates over a year earlier were 6% in the west north central, 12% in the south Atlantic and 7% in the West.

Average feeding rates by regions ranged from 6.7 lb. in the north Atlantic to 4.3 lb. in the south central. About 75% of all reporters keeping milk cows fed some grain or concentrates on Aug. 1. The percentage varied from 96% in the north Atlantic region to 62% in the south central area.

Ration values averaged $2.86 cwt. in milk-selling areas and $2.36 in cream-selling areas. The milk-feed ratio was 1.38 on July 15, compared with 1.33 a year earlier and equal to the record high for mid-July set in 1941. The milkfat-feed ratio of 24.7 compares with 24.0 for July 15, 1959, and was the highest since 1945.

SALMONELLA

(Continued from page 1)

It is available in 50-lb. bags or carload lots.

Dr. Bierer gave the following instructions on how to prepare and use the concentration to wash eggs: add ⅓ lb. of zinc sulfate to 5 gal. of tap water. For a small egg operation a galvanized tub will make an adequate egg-washing vessel. Put enough of the 1% solution of zinc sulfate in the tub to cover a basket of eggs.

Dip the basket slowly up and down for three minutes. Use a second tub, also containing 1% zinc sulfate solution, for a 10-second up-and-down rinse. This second dip is absolutely necessary, even if a commercial egg-washing machine is used, because the first batch of wash water soon becomes laden with debris.

Change the first solution periodically whenever it looks dirty, the researcher said. Better results are obtained with zinc sulfate when the eggs are washed at 110°. However, zinc sulfate operates efficiently even in room temperature solutions. After washing, store eggs in the usual manner, he said.

The zinc sulfate is an effective detergent in itself. And whenever it was mixed with other chemicals or compounds, Dr. Bierer says that the germicidal or bacteria-killing effect was reduced.

Eggs should be washed on the farm as soon as possible after gathering, Dr. Bierer advises. Any delay markedly reduces beneficial results.

POULTS

(Continued from page 1)

increase, and the south Atlantic, with a 132,000 rise, more than made up for the declines, however. Three regions, the west, south central and west north central, showed gains in other heavy breed hatch, while the other four regions either had minor declines or stayed the same.

Large declines in the south Atlantic (224,000), south central (51,000) and the west regions (94,000) accounted for the drop in hatch of light breed poults during July. Other sections had slight gains.

Eggs in Incubators

Turkey eggs in incubators on Aug. 1 indicated that the hatch of heavy breed poults in August will be larger than the hatch in August, 1959, USDA notes. Heavy white breed eggs in incubators totaled 2,440,000 on Aug. 1, compared with 1,917,000 on the same date a year earlier. Other heavy breeds totaled 871,000 on Aug. 1, compared with 220,000 on Aug. 1, 1959.

The light breed hatch in August will be smaller than a year earlier, turkey eggs in incubators indicate. There were 1,737,000 light breed eggs in incubators on Aug. 1 as compared with 1,902,000 the same date last year.

All regions showed an increase in heavy white breed eggs in incubators on Aug. 1. All but the New England region, which remained the same, and the middle Atlantic, which dropped from 14,000 to 8,000, showed a rise from the previous Aug. 1 in other heavy breed eggs in incubators. The east north central region jumped from 1,000 on Aug. 1, 1959 to 92,000 this August, and the west area rose from 112,000 Aug. 1 last year to 539,000 this August.

The east north central was the only region showing a sizeable increase in light breed eggs in incubators on Aug. 1, rising from 270,000 last year to 431,000 this year. The middle Atlantic area had a 3,000 to 8,000 rise, otherwise all areas were either down or the same as last year.

7-Month Picture

The first seven months of 1960 was similar to July, with heavy breed poults experiencing a rise in production and light breeds slumping. Production of heavy breed poults during the first seven months was 6% larger than a year earlier. The hatch of heavy white breed poults during this period was up 13% and other heavy breed poults up 4%. Output of light breed poults January through July was down 38% from the same period in 1959. Total hatch of poults of all breeds during the first seven months of 1960 was 1% less than the total hatched during the first seven months in 1959.

FDA

(Continued from page 1)

period for comments, the Animal Health Institute notes in a monthly news bulletin. FDA will also receive confidential comments on the list from about 800 experts around the country.

Sodium Molybdate

Dr. Janet L. C. Rapp of Morea asked that molybdenum in the form of sodium molybdate be added to the proposed exemption list. She wrote, "In animal rations where molybdenum is not supplied as a natural component, a source of molybdenum, such as sodium molybdate, should be included in the commercial supplement."

Harry W. Titus of Lime Crest asked that manganese dioxide and manganese oxide be deleted from the exemption list and that manganous oxide be inserted on the list. On the proposed FDA list, the following sources of manganese would be exempted from the Food Additive Law: Manganese acetate, manganese carbonate, manganese chloride, manganese dioxide, manganese glyconate, manganese oxide, manganese sulfate and manganese phosphate (dibasic).

Lime Crest wrote that a number of oxides of manganese are "useable," such as grautite, housmanite, manganite, pyrolusite, ramsdellite and mixed oxides with other elements. But it added that "only manganous oxide is entirely suitable for use in animal feeds."

Mr. Titus said, "To be suitable for use in animal feed, a manganese oxide should be readily soluble in the gastric juice of an animal, and it should not serve as an oxidizing agent. Of all the oxides listed above, only manganous oxide is completely soluble in hydrochloric acid having a pH of 2 and does not serve as an oxidizing agent; all the others are at best only partially soluble and serve to varying degrees as oxidizing agents."

Lime Crest said that manganese dioxide (pyrolusite) is "particularly undesirable" in that only about 6% will dissolve in hydrochloric acid having a pH of 2, and it is a "powerful oxidizing agent." The letter said, ". . . it should not be included in feeds for livestock and poultry." The other oxides, the firm said, "vary in their unsuitability as their solubility and oxidizing potential varies."

In recommending that both manganese dioxide and manganese oxide be deleted from the list and that manganous oxide be inserted, the company said that manganese dioxide is a powerful oxidizing agent and manganese oxide is "an ambiguous term and could be construed to mean any of several manganese oxides, including manganese dioxide."

The letter said, "The insertion of manganous oxide is recommended because it is a source of readily available manganese, is not an oxidizing agent, and has been, and is, widely used with safety as a source of manganese in feeds for poultry and livestock."

Advertising Director Resigns ADM Post

MINNEAPOLIS—Gene W. Fowler, director of advertising and public relations for Archer-Daniels-Midland Co. for ten years, has resigned from that position effective Sept. 1, it was announced by ADM. Mr. Fowler said he has not determined his future plans.

Widely known in the paint, boat, feed and lumber industries, Mr. Fowler has been active in nationwide promotional programs for the industries which ADM serves. He is a member of the paint industry suppliers committee and advertising steering committee of the National Paint, Varnish and Lacquer Assn. and has spoken on marketing and color trends at industry meetings.

During his association with ADM, the company has been honored with several advertising awards by the paint industry, including the George Baugh Heckel award and the National Industrial Advertising Assn. Topper award.

Prior to joining ADM in 1950, Mr. Fowler was a partner in Alfred Colle Advertising Agency. Before World War II naval service, he was assistant retail sales manager, Morrison-Merrill & Co., Salt Lake City lumber and building materials firm.

PACKING PLANT SOLD

LOS BANOS, CAL.—The Wolfsen Brothers, farmers and cattle feeders, recently purchased an interest in Walti, Schilling & Co., Santa Cruz, Cal., a meat packing firm. Mr. Wolfsen bought the interests of the Petersen estate and Allan Petersen in the company.

EGG MARKET

(Continued from page 8)

markets were showing very little change in recent weeks.

Prices generally declined ½¢ to mostly 15½¢ level in the South on broilers and fryers. Offerings of live birds were generally adequate and were well cleared by a good processing demand in most areas. Receipts though relatively light, proved fully ample when combined with carryover supplies, and in some instances, dealers discounted prices to clear stocks.

Live hen prices were generally unchanged.

Interest in turkey hens was mainly confined to inquiry and price information. Large volume buyers exhibited little inclination to barter at present high levels, preferring to fill their immediate needs with consumer size Toms at lower values.

Despite an early production this year and with large volume buyers on the sidelines, many dealers believe this year's buying will be at a considerably late date. Early prospects for Labor Day appear good, but based on previously bought supplies. Trade anxiously awaiting some notice of government's intention to purchase turkeys for school lunch program.

RESERVES

(Continued from page 4)

facilities. As the ships had to be moved to dock facilities for unloading and "turning" of stocks, fewer were refilled.

To meet civil defense needs, however, the larger quantities will now be held in the ships, in reserve for possible emergency use. Although the ships are not designed for grain storage and are recognized as emergency space, experience over the years has shown that, with competent care and supervision, they are practical for storage operations, Mr. Morse said. The ships have the special advantage of mobility and could be moved almost anywhere on the east coast to meet local needs.

The department's large stocks of surplus food and feed grains are scattered throughout the country in some 10,000 commercial warehouses and a large number of government-owned special bins. The heaviest concentrations are in or near regions of major grain production, but there are also substantial stocks in other areas. About 34 million bu. of CCC-owned food and feed grains, in addition to regular commercial holdings, are in store now in the eastern states from Virginia north through New England. The 20-25 million bu. of additional wheat will be moved in to supplement these stocks.

The grain which is shipped to the eastern seaboard will come primarily from the heavy producing states of the Middlewest. As storage stocks there are moved out to make room for new harvests this year, they will be channeled to the east as necessary to provide the additional reserve supplies.

TOUR

(Continued from page 4)

equal, if not exceed, last year's. While none of them would admit that soybean oil was the equal of olive oil, they did concede that it was an adequate substitute.

Leaving Chicago, the group split up into two segments—one of which was scheduled to largely visit feed manufacturing plants and research laboratories majoring in nutritional research and kindred matters, while the other's agenda called for an extensive tour of the leading soybean processing plants and analysis laboratories.

The first named group had Waterloo, Charles City, Ames and Des Moines, Iowa; Kansas City and Manhattan, Kansas, and St. Louis, Mo., to visit. The second one was to make stops in Peoria, Ill.; Minneapolis and Mankato, Minn.; Waterloo, Iowa, and St. Louis.

At St. Louis Aug. 19, the two groups were remerged and went on to Memphis to attend the annual soybean convention.

Rain Comes Late For Mississippi

STATE COLLEGE, MISS. — Rain arrived in Mississippi recently, but it was too late to prevent serious damage to major crops, according to county agricultural extension agents.

The agents' reports said that much of the cotton is opening too early, reducing the yield. Cotton also lost squares and young bolls due to the unusually hot, dry weather.

Rains were too late to save corn in many areas and farmers are making silage from corn intended for grain.

However, pastures and late temporary grazing crops are expected to improve now following the rains.

"The hay situation has not changed —still critical. Pastures and gardens remain in poor condition," according to W. B. Latham, Columbus.

HATCH

(Continued from page 1)

late in the hatching season is primarily responsible for the unusual pattern which has developed. And this late egg flock expansion has some observers wondering about the future of egg prices.

Commercial hatcheries in all regions reported increases in output during July, compared with the same month last year. West north central and east south central hatcheries doubled their outputs.

According to the count of chicken eggs in incubators Aug. 1, egg-type hatch expansion through August will be the greatest in the south Atlantic and east north central and east south central states. USDA reports that New England, middle Atlantic and mountain states had fewer egg-type chicken eggs in incubators Aug. 1 than a year earlier.

Production of broiler-type chicks totaled 173,990,000 during July — an increase of 5% over the same month a year earlier. Broiler-type chick production January through July, 1960, totaled 1,223,496,000, which was 4% greater than the 1,179,210,000 chicks hatched during the same months in 1959.

The broiler-type chick hatch will more than likely be larger in August because of a slight increase indicated by the Aug. 1 incubator count. USDA reported that, for the U.S., the number of broiler-type chicken eggs in incubators was 2% greater than a year earlier.

The most obvious change in the broiler-type incubator count was the 29% increase reported for the mountain states. For other regions, the per cent change was no more, and in most cases less than an increase or a decrease of 9%.

Egg-Type Chicks Hatched by Commercial Hatcheries
(000's omitted)

State and division	July 1959	July 1960*	Jan. thru July 1959	Jan. thru July 1960*
Maine	206	48	3,424	2,480
New Hamp.	102	188	2,806	2,078
Vermont	11	10	277	308
Massachusetts	196	274	8,019	8,345
Rhode Island	7	20	222	260
Connecticut	241	376	6,388	6,041
N. E.	763	916	21,136	19,512
New York	570	590	11,778	11,280
New Jersey	310	380	15,450	10,730
Pennsylvania	778	1,012	26,434	23,304
M. A.	1,658	1,982	53,662	45,314
Ohio	620	1,000	22,100	17,500
Indiana	813	1,100	25,719	24,680
Illinois	390	643	26,078	24,326
Michigan	160	180	9,420	7,260
Wisconsin	72	225	11,756	10,058
E. N. C.	2,055	3,148	95,073	83,824
Minnesota	90	104	38,495	31,734
Iowa	80	250	52,410	44,100
Missouri	458	969	22,584	17,211
No. Dakota	7	0	3,551	2,601
So. Dakota	5	150	13,322	11,382
Nebraska	32	40	19,186	15,657
Kansas	66	125	9,144	8,175
W. N. C.	738	1,638	159,144	130,860
Delaware	†	†	†	†
Maryland	36	58	1,357	1,028
Virginia	205	230	5,752	4,477
W. Virginia	†	†	†	†
No. Carolina	255	269	7,537	6,120
So. Carolina	99	190	3,577	3,099
Georgia	507	1,082	12,914	7,977
Florida	685	899	7,398	7,453
S. A.	†1,797	†2,752	†39,507	†30,780
Kentucky	24	110	3,684	2,585
Tennessee	130	400	6,540	5,810
Alabama	165	393	5,102	3,857
Mississippi	221	289	3,932	2,254
E. S. C.	540	1,192	19,258	14,506
Arkansas	164	306	3,315	2,743
Louisiana	195	83	2,173	1,732
Oklahoma	80	180	4,000	3,670
Texas	763	980	17,439	14,640
W. S. C.	1,202	1,549	26,927	22,785
Montana	9	20	1,517	1,094
Idaho	34	28	1,873	1,297
Colorado	104	102	2,392	1,702
Utah	41	39	1,701	1,584
Nevada	...	...	...	...
Mountain	$255	$242	$8,622	$6,589
Washington	492	750	7,203	6,799
Oregon	186	136	3,513	2,871
California	4,298	4,592	37,632	35,955
Pacific	4,976	5,478	48,348	45,625
U. S.	13,984	18,897	471,677	399,795

*Preliminary. †South Atlantic total includes Delaware and West Virginia. $Mountain total includes Wyoming, New Mexico and Arizona.

ADM CAPITAL SPENDING PLANS FOR NEXT 2 YEARS
1960-61 and 1961-62

ADM

(Continued from page 1)

division to the Farmers Union Grain Terminal Assn., St. Paul, and the sale of the Mankato, Minn., feed plant to Hubbard Milling Co., Mankato. (Feedstuffs, Aug. 13).

Mr. Daniels said that both of these operations were minor parts of ADM's over-all operations. He also emphasized that the sale of the country elevators will have little effect on the company's world-wide grain merchandising acivities carried on through its system of terminal elevators. ADM has approximately 74 million bushels of storage capacity in these terminals.

Explaining the new two-year investment plan, Mr. Daniels said the company's directors have approved a budget in excess of $11 million—highest in ADM's history—for the current year for that purpose.

He said an estimated $15 million will be spent in the 1961-62 fiscal year. These increased budgets compare with $4 million for the past year.

Mr. Daniels said, "We have long range plans for a continuous increase in spending for research and development of new products. Our research budget is up 11% from a year ago and is particularly scheduled to keep pace with the accelerated expansion of chemical facilities."

Changed Emphasis

He said the company has changed emphasis from some of its traditional endeavors to fields "where the promise of profits is greater."

Eighty percent of the planned $26 million spending for capital improvements will go for new plants and new products, according to the ADM president, and to expand production and increase efficiency in the company's more than 100 plants, elevators and mines located throughout the U.S.

This record expansion at this time is especially significant, for ADM shortly will announce the results of its 1959-60 operations. Earnings for that period are expected to be below the previous year—a vivid reason why ADM is concentrating on a profit improvement program, said Mr. Daniels.

A major item in the ADM plan is the construction of a new multimillion dollar chemical center at Peoria, Ill. The plant is scheduled for completion in 1962.

This expansion in chemicals underscores ADM's program to emphasize operations with greater return on investment, said Mr. Daniels.

Peoria will enable ADM to move even further into the chemical field. It will give the company facilities to manufacture the new products developed in its laboratories as well as to expand its present broad line of industrial chemicals.

In other segments of the chemical business, ADM is expanding its facilities at Newark, N.J.; Valley Park, Mo.; Pensacola, Fla., and Los Angeles, Cal.

But chemicals are not the only area where ADM is investing, Mr. Daniels continued.

"In the agricultural field," he said, "we are improving our soybean processing facilities, our grain storage and merchandising installations, our flour mills and our alfalfa dehydrating facilities. We are developing a new group of edible soy flours and soy proteins which we believe will have great impact on the nation's food industry.

"We have great faith in the future of American agriculture and we intend to continue participating in the growth of this great industry."

The ADM president pointed out that the company is, in fact, inseparably linked with agriculture, since many of its chemicals are derived from vegetable oils. ADM manufactures more than 1,000 standard products which are used by American industry.

Mr. Daniels said that under the "profit improvement program"—which will be executed vigorously in the '60's—ADM will:

- Concentrate on those businesses that utilize the company's basic strengths and know-how — namely, agriculture and chemicals.
- Expand those phases of the company's businesses—both domestic and overseas—that serve growing profitable markets.
- Accelerate improvement programs for operations which do not show a satisfactory return on investment but which have growth and profit potential.
- Seek new business opportunities, some of which will be the result of expanding research activities, while others will be carefully screened and selected acquisitions.
- Dispose of plants that no longer are profitable and show little promise of improved profitability.

The ADM president stressed that results of the company's expansion program will not show in the company's earnings immediately. "There is an inevitable lag between the start of construction of new plants or the introduction of new products and the time they show up in company profits," Mr. Daniels stated.

Mr. Daniels pointed out that the company is not hesitating to rid itself of those businesses that do not measure up to what ADM considers an adequate return on investment.

Closing of several outmoded, uneconomical plants also has been announced in recent months.

These include the Minneapolis linseed mill, a landmark since 1902; the Hutchinson, Kansas, flour mill, ADM's oldest flour mill, and a small terminal elevator at Buffalo, N.Y.

The closing of the linseed mill does not take ADM out of the linseed business. The company will continue to market linseed oil and meal, Mr. Daniels said.

Improvements at ADM's other large flour mills in Minneapolis, Kansas City and St. Joseph, Mo., will maintain its flour productive capacity despite the shutdown at Hutchinson, said Mr. Daniels.

Closing of the Buffalo elevator was dictated by the changing pattern of the Great Lakes grain trade, which now moves into export channels directly through the St. Lawrence seaway rather than via trans-shipment at Buffalo.

ADM also has disposed of its interest in Applied Radiation Corp., Walnut Creek, Cal., to High Voltage Engineering Corp., Burlington, Mass. This was done because ARCO, which produces linear accelerators, does not fit ADM's objective of concentrating on those businesses that utilize the company's basic know-how and marketing channels, said Mr. Daniels.

For the same reason, ADM is currently negotiating for the sale of its Crosby Aeromarine Division, which manufactures Crosby fiberglass pleasure boats.

"Although we are still in a difficult period of transition, we are confident that the foundations now being laid will result in profitable growth in the years ahead," Mr. Daniels concluded.

STORE OWNER DIES

OKMULGEE, OKLA.—Edgar Everett Rea, owner of Rea Feed & Seed Store here until retirement last year, died in San Angelo. Mr. Rea had also been an appraiser for Central National Bank here for 22 years.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
June 11	1,145	436	828	908	89	746	2,208	2,342
June 18	1,231	456	872	849	76	789	2,212	2,246
June 25	1,159	482	711	782	111	765	2,198	2,261
July 2	1,161	516	821	756	133	815	2,202	2,173
July 9	1,158	424	758	772	107	760	2,176	2,154
July 16	1,155	547	831	800	109	739	1,868	2,233
July 23	1,118	396	752	737	114	924	1,887	2,271
July 30	1,114	415	788	749	84	787	1,785	2,212
Aug. 6	1,132	497	796	773	99	718	1,657	2,109
Aug. 13	1,175	412	721	672	92	750	1,607	2,071

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
June 11	1,325	621	3,526	331	7,872	228	4,410	2,687
June 18	1,199	608	3,504	360	7,710	213	4,248	2,703
June 25	1,127	589	3,584	375	7,690	233	4,184	2,775
July 2	1,178	574	3,356	340	7,449	204	4,265	2,695
July 9	1,132	625	3,364	377	7,298	209	4,057	2,705
July 16	1,258	625	3,237	401	7,142	212	3,856	2,511
July 23	1,208	683	3,235	324	6,776	243	3,934	2,463
July 30	1,303	508	3,077	296	6,640	198	3,659	2,191
Aug. 6	1,123	678	3,095	333	6,231	199	3,518	2,183
Aug. 13	1,095	453	3,080	351	6,195	294	3,391	2,059

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1960	Total 22 areas 1959
June 11	4,376	482	2,591	360	250	1,236	38,998	35,135
June 18	4,348	589	2,473	284	259	1,197	38,426	34,516
June 25	4,279	551	2,482	389	329	1,133	38,189	34,346
July 2	4,200	556	2,331	349	270	1,105	37,449	34,340
July 9	4,064	449	2,217	326	301	1,098	36,531	33,667
July 16	4,046	443	2,179	366	258	1,018	35,834	33,881
July 23	3,801	411	2,113	354	234	920	34,898	33,455
July 30	3,642	433	2,126	309	228	947	33,491	32,044
Aug. 6	3,714	360	2,037	302	253	1,072	32,880	31,302
Aug. 13	3,508	343	1,876	276	218	1,054	31,693	31,136

PROCEEDINGS

(Continued from page 6)

ers at Ohio indicated that feed efficiency was improved whenever the density of the ration was increased. Density was increased with levels of 840, 924, 1008 and 1092 Calories of productive energy per pound with protein levels of 20, 22, 24 and 26, respectively. A C/P ratio of 42 was maintained.

This work indicated that maximum female growth occurred with the 20% protein diet and with a 22% protein diet with males when the broiler chicks were in floor pens. However, they found that a further increase of 2% protein was more effective when the broilers were reared in battery brooders.

A report by Baldini of the du Pont Laboratories showed the chick utilizes metabolizable calories from a complete diet on a more productive basis than those from a methionine deficient diet. The apparent inactivity of cerelose and kaolin to provide metabolizable energy was also confirmed in a report by Sibbald and others at the Ontario Agricultural College.

Although the aforementioned reports are of interest from a fundamental nutrition and feeding viewpoint, it is doubtful whether any alterations in current feeding programs and formulations are necessary.

CONTROLLED FEEDING—Three different attempts to improve performance of laying hens were reported involving chiefly the feeding of high-fiber low-energy diets or the mechanical restriction of feed available to young pullets.

The investigation reported by Thomas and others at Ohio involved feeding a growing ration containing 400, 600, 800 or 1,000 Calories of productive energy per pound combined with 9, 12, 16 or 20% protein, respectively, to pullets from 8 to 24 weeks of age. The 400 Calorie level was accomplished by including 54% oat hulls in the ration and was the only treatment which markedly reduced growth and prolonged sexual maturity.

The pullets were obviously smaller in body weight and laid fewer eggs during the first few weeks of production. Feed conversion was actually improved—but this is to be anticipated with a bird having a smaller body size.

A study reported by Sherwood of General Mills, Inc., indicates that the controlled feeding on a restrictive basis resulted in a slight increase in egg production of pullets developing from fall hatched chicks. This report also included tests with high fiber feeds involving late spring hatched birds. The high fiber feeds (accomplished with either corn cobs or rice hulls) failed to have any effect on egg production although the author concluded that the use of high fiber feed actually increased the cost per bird of the feeding program.

Third Report

The third report on controlling the development of sexual maturity in pullets included vermiculite as an ingredient to reduce productive energy in the feed at work done at South Carolina by Cooper and Barnett. Although body weight was suppressed and feed consumed per bird increased with decreasing levels of energy, egg production and size were not affected appreciably.

A study of controlled energy levels by Hulett and others at the Texas station indicated there was no significant effect on egg production or egg weight with hybrid pullets. Calorie levels employed were 823, 934 and 1027, with a protein level of 17%.

Kurnick and other Arizona workers found that pullets responded differently to either 765, 865 or 965 Calories of productive energy per pound when hatched during different seasons.

Pullets maturing in October produced eggs at a 15% lower rate with a 765 Calorie diet during December, January and February. However, the following six months resulted in a 5% decrease and as a consequence total production was essentially the same as for all three types of diets. Pullets maturing in February failed to respond satisfactorily to the 765 Calorie diet in both egg production and body weight.

Light Treatment

Observations by Berg and others at Washington suggest that light treatment may also have an effect upon the response of laying hens to restricted feeding. Their experiments indicated that a 20% restriction of the ration was ineffective in delaying sexual maturity when a constant treatment of eight hours light per day was provided. Whenever the lighting was increased 40 minutes per week, rapid sexual maturity occurred and feed restriction with this program delayed maturity by 10 days.

This work suggests that conditions must be ideal for early maturity if restricted or other types of feeding or management programs are to have any effect on retarding sexual maturity.

When we consider these and other reports published in previous years, we are faced with the difficulty in deciding whether restricted feeding programs are advantageous for pullets intended primarily for the production of table eggs. Although some of the individual reports indicate an advantage, it is the author's conclusion that there is insufficient evidence of improvement to warrant the use of restricted programs for laying-type pullets on any sound economic basis.

VITAMIN C FOR LAYERS—A further report on the possible role of vitamin C (ascorbic acid) in maintaining egg shell thickness was made by Thornton of Colorado. The report confirms earlier studies that vitamin C may have some beneficial effect in the maintenance of egg shell thickness but the present work indicated that rather high calcium levels are also important. Vitamin C was ineffective at the 2% level of calcium but appeared effective at a 2½ or 3% level of calcium.

It was interesting to hear the report of Pepper and associates at the Ontario Agricultural College since their experiments did not show any beneficial effect of vitamin C at calcium levels of either 1, 2.5 or 4% in rations for hens maintained in pens with temperatures of 75-80° F.

These reports failed to clarify whether vitamin C should be added to rations for laying hens. It is certainly apparent that we should not expect vitamin C to perform miracles in maintaining egg shell thickness during hot weather or the latter part of the laying season of the hen.

The calcium requirements of the laying hen are under considerable study at this time and more will be reported regarding this area of nutrition in Part 2 of this report.

Eli Lilly Reports Sales, Earnings Off

INDIANAPOLIS—Eli Lilly & Co. consolidated sales for the first six months of 1960 were $91.1 million compared with sales of $94.1 million for the 1959 period, the company has announced.

Consolidated net income for the first six months was $10.9 million, compared with $12 million for the first half of 1959. Earnings per common share were $1.36 as compared with $1.50 for the same period a year earlier.

Eugene N. Beesley, president of the company, said that a drop in polio vaccine sales more than offset a modest increase in the combined sales of all other products. He said that a contributing factor in the decline of earnings was the increased cost of doing business, including expenditure of more money for scientific research and development.

Lists Liabilities, Assets

BATTLE CREEK, MICH.—The Battle Creek Dog Food Co. filed a schedule in Federal District Court, Grand Rapids, listing liabilities of $102,295 and assets of $36,408. The firm was adjudged bankrupt by default last April after creditors filed an involuntary petition in bankruptcy.

FEEDSTUFFS

(Continued from page 6)

dropped off to 84,500 tons in June, but the October-June total of almost 2 million tons was about 150,000 tons ahead of a year earlier.

Consumption of oilseed meals in June accounted for almost half of the month's total domestic disappearance. Stocks at processing plants at the end of June stood at 370,500 tons, 38,000 more than a year ago.

Production of wheat millfeeds in June and so far this season was slightly above a year earlier. Imports were down, but exports were up, both for June and the nine-month period, and disappearance of 387,000 tons for June and nearly 3.6 million for the season, were slightly ahead of the same period last year.

Delmarva Broiler Prices Decline 1c

SALISBURY, MD.—Broiler prices in Delmarva slid nearly 1¢ lb. last week. The average price paid on the farm was 17.10¢ compared with 18.04¢ the week before. A year ago, however, the price had fallen to 16.48¢. Nationwide, for 22 reporting states, hatcherymen set 43,069,000 eggs during the week ending Aug. 13. This was 1% below the previous week but 9% above the corresponding week a year ago. Settings were down from the previous week in 16 of the 22 states. States in which sizeable decreases were reported include Texas, Missouri and Arkansas. Georgia, Maryland and Delaware showed sizeable increases over the previous week.

Placements in the 22 states totaled 31,693,000 chicks. This was 4% below the previous week but 2% above the corresponding week a year ago. Decreases were reported for 18 states compared with the previous week. States showing appreciable decreases include West Virginia, Arkansas, Texas, Alabama and Mississippi.

COWS

(Continued from page 1)

More dairy replacement stock was on hand Jan. 1, and lower beef prices tended to slow culling of dairy cows during recent months, USDA says. Price relationships of dairy products and feed continue favorable, although increased competition and cost have influenced some farmers to liquidate their entire herds.

In the north central states, which accounted for 47% of the nation's milk cows in June, 1960, the total number was down about 2% from a year earlier. Numbers in both the east north central and the west north central regions dropped to record lows for June. Ohio, with a 1% increase, was the only state to have a gain in the area, while Minnesota reported no change from June last year. The largest percentage drop occurred in Illinois, which had a 5% decline. Decreases in other north central states ranged from 2-4%, except in Missouri where numbers were down less than 1%. In Wisconsin, the state with the most milk cows, numbers were down 2% from June, 1959.

Reach Record Low

Reaching a record low level in June, 1960, the number of milk cows in the south central region decreased 1% from a year earlier. There were 1% more milk cows in Arkansas, while the number in Kentucky and Tennessee remained unchanged from June a year ago. Other states within the region showed declines ranging from 1-3%.

In the east, after several years of decline, cow numbers were little changed from June, 1959. The only changes in the north Atlantic states were a 1% increase in New Jersey, a slight decline in New York, and decreases of 3% in Massachusetts and 6% in Rhode Island. In the south Atlantic region, milk cow numbers increased in Maryland, Virginia, North Carolina, South Carolina and Florida and held steady in Delaware. However, they decreased 1% from June last year in West Virginia and were off 2% in Georgia.

Milk cow numbers in the west have remained relatively steady during the last decade, USDA notes, and gained only slightly from June, 1959, to June this year. Gains, by states, were: Utah, 3%; New Mexico, 2%, and Idaho, Oregon and California, 1%. Wyoming indicated the largest percentage drop—6%—while cow numbers in Montana, Colorado and Arizona decreased 2% from June a year ago.

MARKETS

(Continued from page 2)

valley feed industry are the continuing announcements by major manufacturers of plans for construction of huge new plants along the river. These will provide employment for many thousands of workers with resultant increased markets for all types of farm products.

Feed manufacturers reported no appreciable change this week in demands for formula feeds, although there was a slight improvement in sales of chick and turkey feeds. With ample supplies available at stockyards and wholesale poultry and egg markets, prices remained virtually static. This situation is expected to continue through the remainder of August, but feed dealers are looking forward to increased consumer demands with the resumption of school and other fall activities next month.

Mountain States

Poultry feeds have been holding up well, but other feed prices and volume were down from a year ago. Business generally is slower than normal but most dealers expect it to pick up in September somewhat and then make a quicker rise in October. Weather conditions are favorable and supplies generally are ample, but demand is slower.

Pacific Northwest

Commercial feed business was considered fair throughout Oregon, Washington and Idaho this week with the emphasis on poultry rations. The sale of dairy and cattle feeds showed a slight decline which the trade generally attributed to the increased use of abundant new crop grains.

Interest in supplemental feeds was restricted because of this fact, and buying interest was limited to immediate prompt shipment of ingredients. General demand was considered fair.

Feed ingredient prices averaged moderately lower during the trading period.

Memphis Oilseed Meal Futures Prices Vary

MEMPHIS, TENN.—Oilseed meal futures prices were irregular on the Memphis Board of Trade during the past week compared with one week earlier.

Soybean oil meal suffered a decline, reflecting a slow cash demand part of the period and a better demand for soybean oil and cottonseed meal. This permitted conversion for processors to be better than in some months, trade sources said, consequently bringing lower prices on oil meal.

The week saw some of the lowest cash soybean oil meal prices in some time as well as new season lows on all futures contracts.

Aug. 15, the demand picked up for soybean oil meal in the cash market, particularly from exporters, who seemed to be capitalizing on reduced prices for nearby shipment.

The nearby demand for cash soybean oil meal brought in short covering on the futures board and a consequent upturn, with nearby options up $2 from low trading levels of the period.

Cottonseed oil meal futures were quiet. There was a fair interest in new crop positions. However, traders said, dealings were prevented because buyers' ideas were still below selling prices.

Unrestricted soybean oil meal closed Aug. 16, 75¢ lower to 25¢ ton higher than one week before; Eastern trunk line soybean oil meal, $1.25 to $3 lower, and bulk solvent cottonseed oil meal, unchanged to 50¢ higher.

Traded were 2,500 tons of unrestricted soybean oil meal.

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Request Alabama Disaster Area

MONTGOMERY, ALA.—President Eisenhower has been asked to declare 18 weather-stricken counties in Alabama as disaster areas. The request was made by Gov. John Patterson in a telegram to the President. Such a request had been recommended by the State Disaster Committee.

Gov. Patterson said that the 18 counties in north and central Alabama are faced with an agricultural crisis.

He said widespread drouth conditions following an "unprecedented hard winter have caused untold damage to large areas of pasture and row crop farming in the counties."

The governor requested that the counties be made eligible for assistance under Public Law 875, especially the disaster relief feed grain program and appealed to the Interstate Commerce Commission for a reduction in freight rates by one half. This relief would allow the farmers to buy feed and grain at a reduced rate, have material shipped at a reduced freight rate and would also make them eligible for federal 3% emergency loans.

Counties named by Gov. Patterson were: Calhoun, Chambers, Clay, Cleburne, Coosa, Blount, DeKalb, Etowah, Franklin, Greene, Marion, Morgan, Pickens, Randolph, Shelby, Sumter, Talladega and Tallapoosa.

Maine Poultry Day Set for Aug. 24

BRUNSWICK, ME.—Poultry feeding, health, mechanization and environment will be discussed by representatives of five poultry industry associations at Maine's annual Poultry Day program scheduled at Bowdoin College here Aug. 24, it has been announced.

The event will be sponsored by the Maine Poultry Improvement Assn. and the Poultry Science Department, University of Maine.

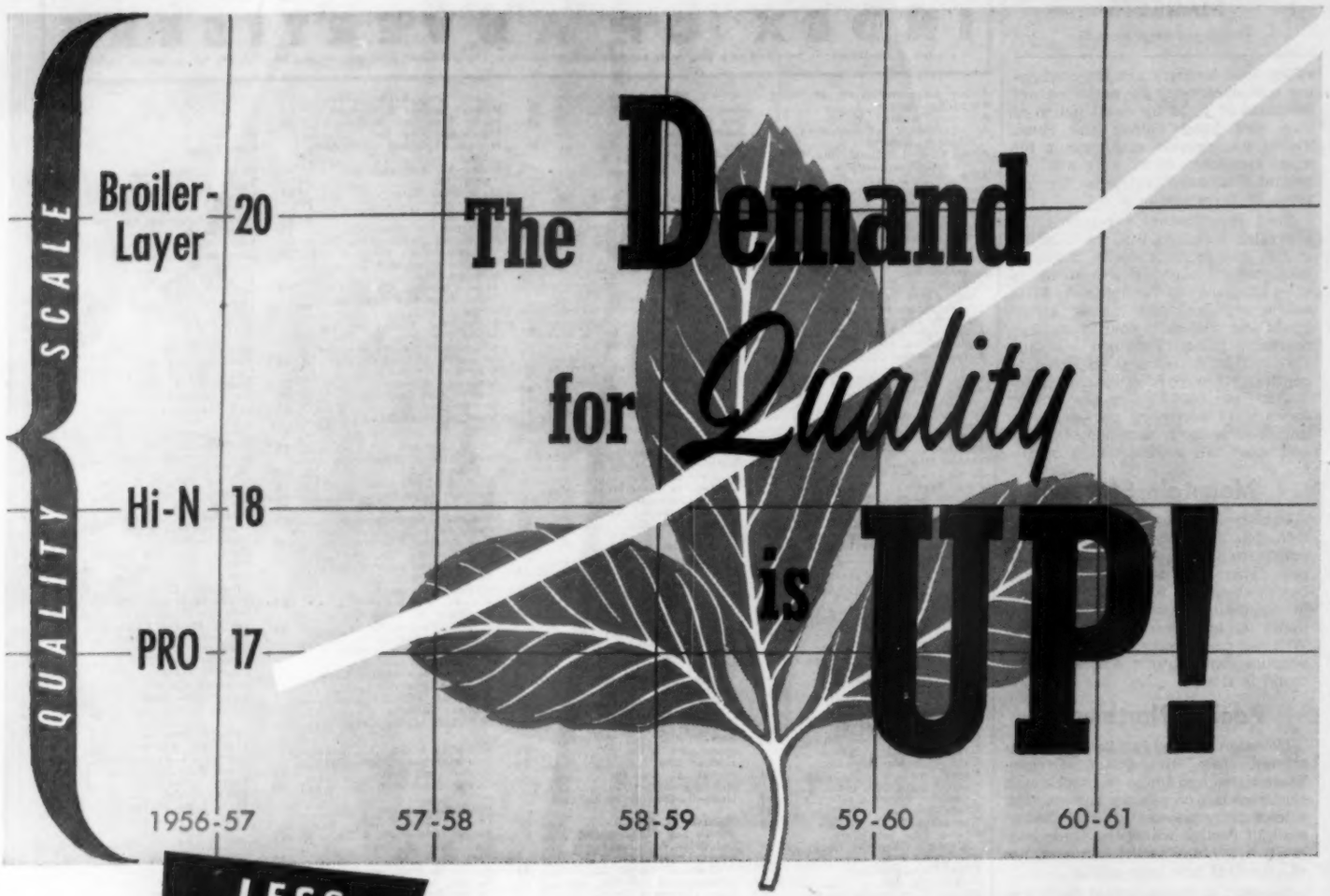
All poultrymen and others concerned with the poultry industry are invited to the gathering, according to Harry C. Whelden, University of Maine extension poultry specialist.

Swine Feed Additive Petition Amended

WASHINGTON — The Food and Drug Administration reported this week that a petition regarding the use of hygromycin B and chlortetracycline in medicated swine feed had been amended to provide for additional disease treatment purposes.

The original petition, the Federal Register says, was for "the issuance of a regulation to provide for the use of 6,000 units of hygromycin B per pound and up to 0.05 gram of chlortetracycline per pound in medicated feed of swine for the prevention and treatment of bacterial swine enteritis, for maintenance of weight gain in the presence of atrophic rhinitis and for reducing the incidence of cervical abscesses."

The petition has been amended "to provide for use of medicated feed as an aid in the control of infestation of large roundworms (Ascaris suis), nodular worm (Oesophagostemum dentatum) and whipworm (Trichuris suis)."



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